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DISSERTATION

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STRATEGIC MANAGEMENT OF COMPETITIVENESS OF PRODUCERS OF AGRO-FOOD PRODUCTS

Specialty 073 - Management
(Field of study 07 – Management and administration)

Submitted for a scientific degree of Doctor of philosophy

The dissertation contains the results of own research.
The use of ideas, results and texts of other authors have references to the relevant source  Guohe Qin

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SUMMARY

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In the current conditions of the development of the global environment, one of the most critical challenges for the world's population is to ensure food security. Due to the uneven distribution of natural resources, individual states experience a constant shortage of food, which, in the context of the increasing convergence of world economies, is increasingly becoming a common urgent problem of the whole society. Ukraine plays one of the leading roles in providing food to different countries of the world. About 400 million people worldwide depend on grain supplies from Ukraine alone, which is about ten times the population of our country. In the pre-war period, Ukraine was the leader in the export of sunflower oil worldwide, consistently ranked first in the supply of barley, corn, wheat, rapeseed, and rapeseed oil. During the war period, Ukraine dropped from 7th to 10th in the world regarding wheat production during the current marketing year. Given the complicated business situation, this result should be considered more than positive.

In addition, it is worth mentioning that in the pre-war period, Ukrainian food products were in demand in European countries, where quality requirements were relatively high. Among these products are butter, honey, tomatoes, etc. The agri-food sector is currently facing a difficult task considering all these positive achievements, which is to develop new methods and tools to increase competitiveness, considering the highly unfavorable conditions of the external environment. The basis for the effectiveness of the functioning of the agricultural sector in general and the agri-food sub-sector, in particular, remains an effective and efficient state policy and support since these industries require mainly

particular tax preferences, direct assistance, benefits, and subsidies for their development. The concessional lending program, introduced in the pre-war period, requires a "reset" and updating, considering the need to return some affected territories to normal functioning, which requires the development of specific programs to support them. The primary investment levers have been and remain the company's funds, which does not allow the use of the leverage effect and increase the efficiency level of agri-food business entities. The leading tools are also innovations aimed at improving the quality of products and fundamentally reducing their cost. Among the management tools, more attention should be paid to project management, characterized by flexibility, transparency, and effective risk management methods, which should have long become the primary tool for developing agri-food business entities. It should be emphasized that the issue of further deepening the study of methods, tools, and approaches to the strategic management of increasing the level of competitiveness of economic entities, considering the specifics of their industry – the agri-food sector – is an urgent and urgent task considering all of the above.

The author's contribution consists in the development of mechanisms and tools for increasing the level of competitiveness of agri-food enterprises based on improving innovation and investment support, considering the influence of environmental factors, through the introduction of a financial and economic mechanism for ensuring the competitiveness of these economic entities.

The study aims to substantiate the theoretical foundations, methodological support, and practical recommendations for introducing mechanisms, tools, and measures to ensure the desired level of competitiveness of agri-food producers.

The following tasks were solved to achieve this goal:

- to consider the nature of strategic management as a concept of an integral approach to ensuring the competitive activity of enterprise;

- to clarify the components and factors of formation of the competitiveness of the enterprise in the agri-food sector;

- to propose methodological principles for assessing the competitiveness of an agri-food enterprise;

- to assess the influence of environmental factors on the formation of competitiveness of economic entities;

- to propose an approach to assessing the efficiency of agri-food enterprises;

- to assess the level of investment and innovation support of the industry under study;

- to propose a financial and economic mechanism for ensuring the competitiveness of agri-food producers;

- to propose a pool of strategies for increasing the competitiveness of agri-food enterprises;

- to assess the state of state support for developing competitive production of agricultural business entities.

The object of the study is the process of ensuring the competitiveness of the activities of the agro-food manufacturing enterprises.

The subject of the study is a set of theoretical, methodical, and applied principles for managing the competitiveness of agro-food enterprises.

Research methods. The achievement of the goal and solution of the tasks of the study led to the use of a system of methods of cognition, including: general scientific – *dialectical* (within the framework of disclosure of the influence of environmental determinants on the trajectory of transformation of approaches in the strategic management of competitiveness of the agri-food sector); *analysis, synthesis, scientific abstraction* (when allocating the essential factors of the architectural composition of socio-economic and organizational mechanisms of strategic management of the competitiveness of the agri-food sector); *combination of historical and logical (in the* study of specific conditions for the development of theoretical ideas and practice of economic management in the segment of the chosen subject of research in their *historical* retrospective); *theoretical generalization* (in solving the problems of improving key categories); special – *statistical* (in terms of studying the dynamics of the agri-food sector as a whole and its individual components); *methods of constructing linear regression, variation series of distribution, the method of integral indicators (in the* course of developing an integral indicator of the efficiency of the use of resources for analytical assessment of the effectiveness of the policy of managing the

competitiveness of business entities in the agri-food sector); *the method of modeling* on the basis of the production function (for

forecasting the effective production activity of economic objects of the branches of the agri-food sector), *graphical* (for the interpretation of cause-and-effect relationships within the framework of the developed mechanisms, as well as the generalization of statistical information).

The information base of the study was made up of data from the State Statistics Service of Ukraine, current reports of agro-food enterprises, data from empirical studies, methodological methods, and moral and legal acts of Ukraine.

The scientific novelty of the obtained results lies in obtaining a solution to the scientific problem of improving the mechanisms for managing the strategic competitiveness of agri-food enterprises.

Improved:

– determination of the primary vector of the strategic mission of sectoral transformation in the agri-food sector, which reflects the main trends in the formatting of the socio-economic space in the plane of combining environmental and humanistic ethics, which in content corresponds to the paradigm of sustainable development and includes, as a necessary element, the implementation of ESG principles at the level of individual economic entities as components of a higher-order system;

– algorithm of strategic management of competitiveness of the agri-food sector, which is structured into stages, combined by a system of interdependent influence based on a corrective function, the consistent passage of which ensures the implementation of the industry's mission in the system of responding to environmental challenges per the methodology of management on weak signals in the process of mobilizing internal potential based on the synergy of resource, location, structural, organizational components;

– architectural composition of the financial mechanism for increasing the competitiveness of business entities in the agri-food sector, which structurally includes financial-organizational and financial-economic blocks. In contrast to the existing approaches, the proposed architectonics of the financial mechanism contains levers, methods, forms, and models strategically focused on the inclusive provision of

agri-food enterprises with financial resources based on sustainable development targets. blended financing, the core of which is environmental priorities and values, and is also based on a value chain balanced in terms of values and interests;

– a mechanism for increasing the competitiveness of agri-food sectors, which operates based on a combination of market segmentation tools by the criterion of qualitative assessment of the needs of existing and potential consumers, analysis of the current and projected competitiveness of goods, taking into account the assessment of trends in the transformation of consumer tastes and is implemented on the methodological principles of benchmarking as an interdependent process of assessment and comparison in the adaptation of enterprises in the agri-food sector to the based on the implementation of benchmarks for the effective functioning of direct competitors, embodying a vital element of the microeconomic marketing environment in order to improve a set of strategic management measures.

The following have been further developed:

– methodical approaches to the organization of leasing financial relations in the agri-food sector, which, in addition to traditional forms of operational and financial leasing, provides for a business option of prolonged purchase (replacement) of the leased object based on the application of a preferential credit and financial mechanism between the lessor and the lessee;

– approaches to managing the competitiveness of agri-food enterprises, which, unlike those known in practice, are built on the chain principle of organization of production and business. Among the strategic drivers for increasing the competitiveness of agri-food chain participants, the following were identified: innovation and smart agriculture 5.0; intensification of the pace of digitalization transformations of the industry; environmental standards and certification; Organic Agricultural Production and the development of circular business models; socially responsible marketing policy and branding;

– a system for assessing the competitiveness of the agri-food sector through the inclusion of a qualitative criterion for balancing the actions of economic entities and state authorities to create competitive advantages based on the institutionalization of adequate economic, organizational, political, legal, and

social conditions for increasing the potential for the use of factors of production (natural, human capital), determinants of growth in volumes and increasing the efficiency of the use of factors production (investments, innovations, development of connected and supporting industries).

The study's primary results are practical and can be used in the activities of agri-food producers. The proposed individual practical recommendations are implemented in the activities at enterprises, which confirms the practical significance of the work. Theoretical and methodological provisions and developments of the author are used in the educational program of the State Biotechnological University.

The research results presented in the dissertation work are the author's work. The presentation contains a scientific substantiation of the idea of improving the mechanisms of strategic management of the competitiveness of agri-food producers, which is reflected in the author's scientific publications. In the dissertation, only those provisions of scientific publications, made in the authorship, which are imposed on the individual obtainer, are used.

Keywords: strategic management, competitiveness, agri-food sphere, organizational and economic mechanism, enterprise, profitability.

АНОТАЦІЯ

Гохе Цінь, Стратегічне управління конкурентоспроможністю підприємств-виробників агропродовольчої продукції. – На правах рукопису.

Дисертація на здобуття наукового ступеня кандидата економічних наук за спеціальністю 073 Менеджмент галузі знань 07 Управління і адміністрування. – Державний біотехнологічний університет, Харків, 2023.

В сучасних умовах розвитку глобального середовища одним із найбільш важливих викликів для населення планети є забезпечення продовольчої безпеки. Через нерівномірність розміщення природних ресурсів окремі держави відчувають постійну нестачу продуктів харчування, що в умовах підвищення рівня конвергенції світових економік все частіше стає спільною нагальною проблемою всього суспільства. Україна відіграє одну із провідних ролей в забезпеченні продуктами харчування різних країн світу.

Близько 400 млн населення по всьому світу залежить від поставок зерна лише з України, що приблизно вдесятеро перевищує чисельність населення нашої держави. В довоєнний період Україна лідирувала в експорті соняшникової олії по всьому світі, стабільно займала перші місця в постачанні ячменю, кукурудзи, пшениці, насіння рапсу та рапсової олії. У воєнний період за поточний маркетинговий рік Україна спустилася за обсягами виробництва пшениці з 7-го на 10-е місце у світі. Враховуючи надскладну ситуацію для ведення господарчої діяльності, такий результат варто вважати більш ніж позитивним.

Крім того, варто згадати, що в довоєнний період українські продукти харчування користувалися попитом в країнах Європи, де вимоги до якості є достатньо високими. Серед цих продуктів і вершкове масло, і мед, і томати тощо. Враховуючи всі ці позитивні здобутки, наразі перед суб'єктами агропродовольчої сфери стоїть складне завдання, яке полягає в розробці нових методів та інструментів підвищення рівня конкурентоспроможності, враховуючи вкрай несприятливі умови впливу зовнішнього середовища. Основою ефективності функціонування аграрного сектору в цілому та агропродовольчої підгалузі зокрема залишається ефективна та дієва державна політика та підтримка, так як ці галузі для свого розвитку вимагають переважно спеціальних податкових преференцій, прямої допомоги, пільг та субсидій. Програма пільгового кредитування, яка була запроваджена в довоєнний час, вимагає «перезавантаження» та актуалізації, враховуючи необхідність повернення окремих постраждалих територій до нормального функціонування, що вимагає розробки специфічних програм їх підтримки. Основними інвестиційними важелями були та залишаються власні кошти підприємства, що не дозволяє використовувати ефект левериджу та підвищувати рівень ефективності діяльності суб'єктів господарювання агропродовольчої сфери. Провідними інструментами також залишаються інновації, які направлені не лише на підвищення якості продукції, але й на принципове зниження її собівартості. Серед управлінського інструментарію недостатня увага приділяється проєктному управлінню, яке відрізняється гнучкістю, прозорістю та ефективними

методами управління ризиками, яке давно повинно стати основним інструментом розвитку суб’єктів господарювання агропродовольчої сфери. Враховуючи все вищевикладене варто наголосити, що питання подальшого поглиблення вивчення методів, інструментів і підходів щодо стратегічного управління підвищенням рівня конкурентоспроможності суб’єктів господарювання з урахуванням специфіки їх галузі – агропродовольчої сфери – є актуальним та нагальним завданням.

Внесок автора полягає у розробці механізмів та інструментів підвищення рівня конкурентоспроможності підприємств-виробників агропродовольчої продукції на основі вдосконалення інноваційно-інвестиційного забезпечення, врахування впливу чинників зовнішнього середовища, шляхом впровадження фінансово-економічного механізму забезпечення конкурентоспроможності зазначених суб'єктів господарювання.

Мета дослідження полягає в обґрунтуванні теоретичних засад, методичного забезпечення і практичних рекомендацій щодо впровадження механізмів, інструментів і заходів для забезпечення бажаного рівня конкурентоспроможності підприємств-виробників агропродовольчої продукції.

Для досягнення поставленої мети було вирішено такі завдання:

– розглянути природу стратегічного управління як концепцію інтегрального підходу до забезпечення конкурентоспроможної діяльності підприємства;

– уточнити складові і чинники формування конкурентоспроможності підприємства агропродовольчої сфери;

– запропоновувати методичні засади оцінки конкурентоспроможності підприємства агропродовольчої сфери;

– оцінити вплив чинників зовнішнього середовища на формування конкурентоспроможності суб’єктів господарювання;

– запропонувати підхід до оцінювання ефективності діяльності підприємств агропродовольчої сфери;

– оцінити рівень інвестиційно-інноваційного забезпечення досліджуваної галузі;

– запропонувати фінансово-економічний механізм забезпечення конкурентоспроможності суб'єктів-виробників агропродовольчої продукції;

– запропонувати пул стратегій підвищення конкурентоспроможності підприємств агропродовольчої сфери;

– оцінити стан державної підтримки розвитку конкурентоспроможного виробництва суб'єктів господарювання агропромисловості.

Об'єктом дослідження визначено процес забезпечення конкурентоспроможності діяльності підприємств-виробників агропродовольчої сфери.

Предметом дослідження виступає множина теоретичних, методичних і прикладних засад управління конкурентоспроможністю підприємств агропродовольчої сфери.

Методи дослідження. Досягнення мети та вирішення завдань дослідження зумовило використання системи методів пізнання, серед яких: загальнонаукові – *діалектичний* (в рамках розкриття впливу детермінант зовнішнього середовища на траєкторії трансформації підходів у стратегічному управлінні конкурентоспроможністю агропродовольчого сектору); *аналізу, синтезу, наукової абстракції* (при виділенні базових факторів архітектурної композиції соціально-економічних та організаційних механізмів стратегічного управління конкурентоспроможністю агропродовольчого сектору); *поєднання історичного та логічного* (при дослідженні конкретних умов розвитку теоретичних уявлень та практики господарювання у сегменті обраного предмету дослідження в їх *історичній* ретроспективі); *теоретичного узагальнення* (у вирішенні задач удосконалення ключових категорій); спеціальні – *статистичний* (в аспектах дослідження динаміки агропродовольчого сектору в цілому і окремих його складових); *методи побудови лінійної регресії, варіаційних рядів розподілу, метод інтегральних показників* (в ході розробки інтегрального індикатору ефективності використання ресурсів для аналітичного оцінювання результативності політики управління конкурентоспроможністю бізнес-суб'єктів агропродовольчої сфери); *метод моделювання* на основі виробничої функції (для прогнозування ефективної виробничої діяльності об'єктів господарювання галузей агропродовольчої

сфери), *графічний* (для інтерпретації причинно-наслідкових зв'язків в рамках розроблених механізмів, а також узагальнення статистичної інформації).

Інформаційну базу дослідження склали дані Державної служби статистики України, річні звіти агропродовльних підприємств, дані емпіричних досліджень, методичні розробки, нормативні та правові акти України.

Наукова новизна одержаних результатів полягає в отриманні розв'язання наукової задачі вдосконалення механізмів управління стратегічною конкурентоспроможністю підприємств-виробників агропродовольчої продукції.

удосконалено:

– визначення основного вектору стратегічної місії галузевої трансформації в агропродовольчому секторі, який відбиває основні тренди форматування соціально-економічного простору в площині поєднання екологічної і гуманістичної етики, що за змістом відповідає парадигмі сталого розвитку та включає в якості необхідного елементу імплементацію принципів ESG на рівні окремих суб'єктів господарювання як складових системи більш високого порядку;

– алгоритм стратегічного управління конкурентоспроможністю агропродовольчого сектору, що структуровано на етапи, поєднані системою взаємообумовленого впливу на основі корегувальної функції, послідовне проходження яких забезпечує реалізацію місії галузі в системі реагування на виклики зовнішнього середовища у відповідності до методології управління за слабкими сигналами в процесі мобілізації внутрішнього потенціалу на основі синергії ресурсних, локаційних, структурних, організаційних компонент;

– архітектурну композицію фінансового механізму підвищення конкурентоспроможності бізнес-суб'єктів агропродовольчого сектору, яка структурно включає фінансово-організаційний та фінансово-економічний блоки. На відміну від існуючих підходів, запропонована архітектоніка фінансового механізму містить важелі, методи, форми та моделі, які стратегічно орієнтовані на інклюзивне забезпечення підприємств

агропродовольчої сфери фінансовими ресурсами на основі цільових орієнтирів сталого розвитку, змішаного фінансування, ядром якого постають екологічні пріоритети і цінності, а також ґрунтується на збалансованому за цінностями і інтересами агропродуктовому ланцюзі вартості;

– механізм підвищення конкурентоспроможності галузей агропродовольчої сфери, що діє на основі поєднання інструментів сегментації ринку за критерієм якісної оцінки потреб наявних і потенційних споживачів, аналізу актуальної та прогнозованої конкурентоспроможності товарів з урахуванням оцінки трендів трансформації споживацьких смаків і реалізується на методологічних принципах бенчмаркингу як взаємообумовленого процесу оцінки та співставлення в адаптації підприємств агропродовольчого сектору на основі імплементації еталонних показників ефективного функціонування прямих конкурентів, що уособлюють ключовий елемент мікроекономічного маркетингового середовища з метою вдосконалення комплексу заходів стратегічного управління.

Дістали подальшого розвитку:

- методичні підходи до організації лізингових фінансових відносин у агропродовольчому секторі, який крім традиційних форм операційного і фінансового лізингу передбачає бізнес-варіант пролонгованої купівлі (заміни) об’єкту лізингу на основі застосування пільгового кредитно-фінансового механізму між лізингодавцем і лізингоодержувачем;

- підходи до управління конкурентоспроможністю підприємств агропродовольчої сфери, які, на відміну від відомих у практичній площині, побудовані за ланцюговим принципом організації виробництва і бізнесу. Серед стратегічних драйверів підвищення конкурентоспроможності учасників агропродовольчого ланцюга були визначені: інновації та smart-сільське господарство 5.0; інтенсифікація темпів цифровізаційних трансформацій галузі; екологічні стандарти та сертифікація; органічне агровиробництво та розвиток циркулярних бізнес-моделей; соціально відповідальна маркетингова політика та брендинг;

– система оцінки конкурентоспроможності агропродовольчої сфери через включення якісного критерію збалансованості дій суб'єктів господарювання та державних органів влади зі створення конкурентних переваг на основі інституціоналізації адекватних економічних, організаційних, політичних, правових, соціальних умов нарощування потенціалу використання факторів виробництва (природний, людський капітал), детермінант зростання обсягів та підвищення ефективності використання факторів виробництва (інвестиції, інновації, розвиток сполучених та підтримуючих галузей).

Основні результати дослідження мають практичний характер і можуть бути використані в діяльності підприємств-виробників агропродовольчої продукції. Запропоновані окремі практичні рекомендації впроваджені в діяльність на підприємствах, що підтверджує практичну значущість роботи. Теоретичні та методичні положення та розробки автора використовуються в навчальному процесі Державного біотехнологічного університету.

Отримані результати дослідження, викладені в дисертаційній роботі, є особистим здобутком автора. Дисертація містить наукове обґрунтування ідей вдосконалення механізмів стратегічного управління конкурентоспроможністю підприємств-виробників агропродовольчої продукції, що знайшло відображення в наукових публікаціях автора. У дисертації використано лише ті положення наукових публікацій, виконаних у співавторстві, які належать особисто здобувачеві.

Ключові слова: стратегічне управління, конкурентоспроможність, агропродовольча сфера, організаційно-економічний механізм, підприємство, рентабельність.

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CONTENT

INTRODUCTION

In the current conditions of the development of the global environment, one of the most critical challenges for the world's population is to ensure food security. Due to the uneven distribution of natural resources, individual states experience a constant shortage of food, which, in the context of the increasing convergence of world economies, is increasingly becoming a common urgent problem of the whole society. Ukraine plays one of the leading roles in providing food to different countries of the world. About 400 million people worldwide depend on grain supplies from Ukraine alone, which is about ten times the population of our country. In the pre-war period, Ukraine was the leader in the export of sunflower oil worldwide, consistently ranked first in the supply of barley, corn, wheat, rapeseed, and rapeseed oil. During the war period, Ukraine dropped from 7th to 10th in the world regarding wheat production during the current marketing year. Given the complicated business situation, this result should be considered more than positive.

In addition, it is worth mentioning that in the pre-war period, Ukrainian food products were in demand in European countries, where quality requirements were relatively high. Among these products are butter, honey, tomatoes, etc. The agri-food sector is currently facing a difficult task considering all these positive achievements, which is to develop new methods and tools to increase competitiveness, considering the highly unfavorable conditions of the external environment. The basis for the effectiveness of the functioning of the agricultural sector in general and the agri-food sub-sector, in particular, remains an effective and efficient state policy and support since these industries require mainly particular tax preferences, direct assistance, benefits, and subsidies for their development. The concessional lending program, introduced in the pre-war period, requires a "reset" and updating, considering the need to return some affected territories to normal functioning, which requires the development of specific programs to support them. The primary investment levers have been and remain

the company's funds, which does not allow the use of the leverage effect and increase the efficiency level of agri-food business entities. The leading tools are also innovations aimed at improving the quality of products and fundamentally reducing their cost. Among the management tools, more attention should be paid to project management, characterized by flexibility, transparency, and effective risk management methods, which should have long become the primary tool for developing agri-food business entities. It should be emphasized that the issue of further deepening the study of methods, tools, and approaches to the strategic management of increasing the level of competitiveness of economic entities, considering the specifics of their industry – the agri-food sector – is an urgent and urgent task considering all of the above.

The author's contribution consists in the development of mechanisms and tools for increasing the level of competitiveness of agri-food enterprises based on improving innovation and investment support, considering the influence of environmental factors, through the introduction of a financial and economic mechanism for ensuring the competitiveness of these economic entities.

A significant number of domestic scientists and economists devoted their attention to developing the theoretical and practical foundations of the problems of increasing the competitiveness of domestic agriculture. In particular, significant attention was paid to this topic by N. Bugas, A. Butenko, I. Vinichenko, Y. Danko, V. Boyko, M. Kotsenko, N. Patyka, Y. Shvets, M. Porter, A. Meskon, F. Kotler and many other domestic and foreign scientists.

Many scientists chose the study of the agro-food market as the object of their research, in particular, O.I. Kotykova, M.M. Babich, R.E. Zvarych, and G.S. Kukel. In the works of O.M. Nikoliuk, V.V. Khachatryan, I.M. Dashko, O.V. Mukan, M.I. Zlydnyk, M.Y. Malik, and O.A. Nuzhnoi. In their works, the issues of competitiveness of the agro-industrial complex are characterized.

Attracting investments into the economy of our country and their effective use in the conditions of modernization and diversification of the market economy has both social and economic significance. Thanks to the fact that investments

affect the rates of reproduction in the economy, provide scientific and technical development and employment of the majority of the population, fundamental structural changes in the economy take place, and the development of labor resources, which largely depend on investment activity, takes place rationally and optimally. The work of many researchers is devoted to the study of investments as a tool for increasing competitiveness: Tulchynska S., Popelo O., Tkachenko T., Tsekanovski Z., Vyrebek G., Forester S., Ustinova G., Li K., Xu K., Reuter L. and other.

Despite the obtained results, further deepening of the existing theoretical and scientific-methodical toolkit is necessary to increase the level of competitiveness of domestic agro-industrial enterprises from a strategic perspective.

Connection of work with scientific programs, plans, and topics. The work was carried out following the scientific research plan of the Kharkiv Petro Vasylenko National Technical University of Agriculture on the topic "Mechanisms of increasing competitiveness, development of the economic and production-technological potential of objects of agro-industrial production" (number of the state 0116U003477, 2016-2020) and "Systems of managing the competitive promotion of agricultural products in the conditions of the globalization of agricultural markets" (state registration number 0119U001387, 2019-2021). The purpose of the project is to develop an algorithm for mixed financial provision of participants in agri-food value chains, to improve methodical approaches to the organization of leasing financial relations in the agri-food sector, to clarify a set of drivers for increasing the competitiveness of business entities of the agri-food chain, and to develop a set of marketing factors that determine the competitiveness of agri-food sector enterprises.

The study aims to substantiate the theoretical foundations, methodological support, and practical recommendations for introducing mechanisms, tools, and measures to ensure the desired level of competitiveness of agri-food producers.

The following tasks were solved to achieve this goal:

- to consider the nature of strategic management as a concept of an integral approach to ensuring the competitive activity of enterprise;

- to clarify the components and factors of formation of the competitiveness of the enterprise in the agri-food sector;

- to propose methodological principles for assessing the competitiveness of an agri-food enterprise;

- to assess the influence of environmental factors on the formation of competitiveness of economic entities;

- to propose an approach to assessing the efficiency of agri-food enterprises;

- to assess the level of investment and innovation support of the industry under study;

- to propose a financial and economic mechanism for ensuring the competitiveness of agri-food producers;

- to propose a pool of strategies for increasing the competitiveness of agri-food enterprises;

- to assess the state of state support for developing competitive production of agricultural business entities.

The object of the study is the process of ensuring the competitiveness of the activities of the agro-food manufacturing enterprises.

The subject of the study is a set of theoretical, methodical, and applied principles for managing the competitiveness of agro-food enterprises.

Research methods. The achievement of the goal and solution of the tasks of the study led to the use of a system of methods of cognition, including: general scientific – *dialectical* (within the framework of disclosure of the influence of environmental determinants on the trajectory of transformation of approaches in the strategic management of competitiveness of the agri-food sector); *analysis, synthesis, scientific abstraction* (when allocating the essential factors of the architectural composition of socio-economic and organizational mechanisms of strategic management of the competitiveness of the agri-food sector); *combination of historical and logical (in the* study of specific conditions for the development of

theoretical ideas and practice of economic management in the segment of the chosen subject of research in their *historical* retrospective); *theoretical generalization* (in solving the problems of improving key categories); special – *statistical* (in terms of studying the dynamics of the agri-food sector as a whole and its individual components); *methods of constructing linear regression, variation series of distribution, the method of integral indicators (in the* course of developing an integral indicator of the efficiency of the use of resources for analytical assessment of the effectiveness of the policy of managing the competitiveness of business entities in the agri-food sector); *the method of modeling* on the basis of the production function (for

forecasting the effective production activity of economic objects of the branches of the agri-food sector), *graphical* (for the interpretation of cause-and-effect relationships within the framework of the developed mechanisms, as well as the generalization of statistical information).

The information base of the study was made up of data from the State Statistics Service of Ukraine, current reports of agro-food enterprises, data from empirical studies, methodological methods, and moral and legal acts of Ukraine.

The scientific novelty of the obtained results lies in obtaining a solution to the scientific problem of improving the mechanisms for managing the strategic competitiveness of agri-food enterprises.

Improved:

– - determination of the primary vector of the strategic mission of sectoral transformation in the agri-food sector, which reflects the main trends in the formatting of the socio-economic space in the plane of combining environmental and humanistic ethics, which in content corresponds to the paradigm of sustainable development and includes, as a necessary element, the implementation of ESG principles at the level of individual economic entities as components of a higher-order system;

– - algorithm of strategic management of competitiveness of the agri-food sector, which is structured into stages, combined by a system of interdependent

influence based on a corrective function, the consistent passage of which ensures the implementation of the industry's mission in the system of responding to environmental challenges per the methodology of management on weak signals in the process of mobilizing internal potential based on the synergy of resource, location, structural, organizational components;

– - architectural composition of the financial mechanism for increasing the competitiveness of business entities in the agri-food sector, which structurally includes financial-organizational and financial-economic blocks. In contrast to the existing approaches, the proposed architectonics of the financial mechanism contains levers, methods, forms, and models strategically focused on the inclusive provision of agri-food enterprises with financial resources based on sustainable development targets. blended financing, the core of which is environmental priorities and values, and is also based on a value chain balanced in terms of values and interests;

– - a mechanism for increasing the competitiveness of agri-food sectors, which operates based on a combination of market segmentation tools by the criterion of qualitative assessment of the needs of existing and potential consumers, analysis of the current and projected competitiveness of goods, taking into account the assessment of trends in the transformation of consumer tastes and is implemented on the methodological principles of benchmarking as an interdependent process of assessment and comparison in the adaptation of enterprises in the agri-food sector to the based on the implementation of benchmarks for the effective functioning of direct competitors, embodying a vital element of the microeconomic marketing environment in order to improve a set of strategic management measures.

The following have been further developed:

– - methodical approaches to the organization of leasing financial relations in the agri-food sector, which, in addition to traditional forms of operational and financial leasing, provides for a business option of prolonged purchase

(replacement) of the leased object based on the application of a preferential credit and financial mechanism between the lessor and the lessee;

– - approaches to managing the competitiveness of agri-food enterprises, which, unlike those known in practice, are built on the chain principle of organization of production and business. Among the strategic drivers for increasing the competitiveness of agri-food chain participants, the following were identified: innovation and smart agriculture 5.0; intensification of the pace of digitalization transformations of the industry; environmental standards and certification; Organic Agricultural Production and the development of circular business models; socially responsible marketing policy and branding;

– - a system for assessing the competitiveness of the agri-food sector through the inclusion of a qualitative criterion for balancing the actions of economic entities and state authorities to create competitive advantages based on the institutionalization of adequate economic, organizational, political, legal, and social conditions for increasing the potential for the use of factors of production (natural, human capital), determinants of growth in volumes and increasing the efficiency of the use of factors production (investments, innovations, development of connected and supporting industries).

Practical significance of the obtained results. The main results of the study have practical implications and can be used in the activities of agro-food enterprises.

The results of the study are praised and accepted for approval:

SE DG "Elitne" of the Plant Breeding Institute named after V.Ya. Yuryev National Academy of Sciences of Ukraine (certificate No. 18/05 dated 18.05.2023 p.) and "AGRO-NOVA" LLC of Zolochiv District, Kharkiv Region (certificate No. 38 dated 05.22.2023). The theoretical and methodical provisions of disciplinary research are drawn up in the educational process of the State Biotechnological University (reference No. 02-047 dated 09.05.2023 p.).

The study's primary results are practical and can be used in the activities of agri-food producers. The proposed individual practical recommendations are

implemented in the activities at enterprises, which confirms the practical significance of the work. Theoretical and methodological provisions and developments of the author are used in the educational program of the State Biotechnological University.

The research results presented in the dissertation work are the author's work. The presentation contains a scientific substantiation of the idea of improving the mechanisms of strategic management of the competitiveness of agri-food producers, which is reflected in the author's scientific publications. In the dissertation, only those provisions of scientific publications, made in the authorship, which are imposed on the individual obtainer, are used.

Application of the results of deception. Application of the results of deception. The main provisions and methods of deception were made public at conferences. Proceedings at scientific and practical conferences: VII International Scientific and Practical Conference "Management of the Development of Socio-Economic Systems" (Kharkov, April 20-21, 2023), VII International Scientific and Practical Conference "Management of the 21st Century: Globalization Challenges" (18 May 2023, Poltava), VI International Scientific and Practical Conference "Modern Technologies of Human Development in an Integrated Society under Martial Law" (Mykolaiv, May 19, 2022), VII International Scientific and Practical Conference "Modern Technologies of Human Development in integrated society under martial law" (Mykolaiv, May 19, 2023).

Publications. The scientific achievements of the PhD student were described in 8 scientific papers with a total volume of 2.4 (printing. arch.): 4 articles and 4 abstracts of conference materials were published in domestic scientific publications.

Structure and scope of deduction. The dissertation work consists of an introduction, chapters, conclusions, nine excavated chapters and appendices. The total volume of the dissertation is 207 pages, of which 176 are the main text. The work contains 25 tables, 27 figures, and 1 appendix. The list of excavated prisons includes 201 names.

CHAPTER I

SCIENTIFIC AND THEORETICAL PRINCIPLES OF STRATEGIC MANAGEMENT OF THE COMPETITIVENESS OF AGRICULTURAL ENTERPRISES

1.1. Strategic Management as a Concept of Integral Approach to Competitive Activity

Increasing competitiveness is a crucial element in the development of the economic system at each level of abstraction, including the micro-level (enterprises), the meso-level (regions, industries), the macro-level (national economies), and the mega-level (world economy). The achievement of this goal becomes a reality under the introduction of modern forms and methods that meet the challenges of the modern economy, among which strategic management demonstrates the most excellent efficiency. The polyvariance of development, which is immanent in economic structures, provides a request for proactive decision-making with the development of mechanisms for their implementation in acquiring sustainability of functioning.

The integral approach to competitiveness considers it as an advantage over competitors in selected market segments in a limited time dimension, which has been assessed at the level of environmental entities and is determined by the factors of commodity competitiveness and the level of competitive potential (the ability of the enterprise in the future to develop, manufacture, sell and serve goods that are superior to analogs in quality and price). The integral approach in the concept of competitiveness combines into a single mechanism levers and categories conceptually justified by adherents of factor, product analysis, and views from the standpoint of competitive advantages and potentials. In the scientific literature, there are shortcomings of the integral approach to competitiveness, including [106, p. 14]:

– additivity, which does not allow us to determine the interaction between the components:

– lack of allocated priority strategic components;

– high probability of eclecticism;

– underestimating the synergy of components.

In our opinion, at the sectoral level, it is strategic management that is the core of the concept of an integral approach to substantiating effective functioning in market conditions of management because it allows for neutralization of potential problems in its implementation by focusing on adaptation to a dynamic external environment through algorithms for avoiding potential threats, mitigating risk factors and developing opportunities based on taking into account the interaction and synergy of components.

An adequate assessment of the potential that is available and can be achieved allows the process of formulating a strategy to be carried out following the internal and external possibilities of competitive development of industries and activities in achieving goals; organize and stimulate the activities of industries to achieve goals based on ensuring the implementation of the developed strategies. This fully applies to the agri-food sectors, the competitiveness of which determines the level of economic security, filling the budget of the state and regional levels, employment on the ground, resource use, and sustainable development of the economy. This conclusion follows from the understanding of the essence of the concept of the "agri-food sector".

According to O.I. Pavlov, the agri-food sphere is not only a particular sector of the economy that unites industries and types of economic activity that are included in a single technological cycle of production and promotion of agricultural products and food products to the market but also a natural and social spatial rural-urban combined formation [143, p. 7]. From this statement, it can be concluded that the concept of the "agri-food sphere" is broader than the concept of the "agri-food complex" since it considers the complex territorial subsystem within which the activities of economic entities take place. The territorial factor, features,

and specifics of regional localization play an essential role in the intersectoral integration of the entire agro-industrial sphere, which is implemented in the form of multi-scale formations of a local type [137, p. 955]. This means that the study of the agri-food sector as an environment modified because of agricultural and processing activities (agricultural land, agro-industrial complex, service sector of the agricultural and food sectors) should take place, considering the spatial factor. This will give an analysis of the integrity of the agri-food system and will highlight the environmental, economic, and social aspects of development.

The complex branches of the agri-food sector face urgent tasks of purposeful reorientation of commodity policy towards the expansion of the nomenclature and assortment, mastering the integrated management of innovations, development of production potential, restructuring of the production structure, development of vertical and horizontal cooperative ties, specialization of production, transformation of marketing components in process management, improvement of organizational management structures, modernization of personnel work in terms of training and retraining of personnel, etc. Their solution in the context of paradigmatic changes in the principles of interaction between economic entities lies in the vector of strategic management, which should contribute to the development of the sector, forming its corporatization and increasing capitalization. Subsystems, which are the object of management, include such types of potential as institutional, production, resource, natural, logistics, and foreign economics.

The process of strategic management is systematic; regarding the structure of its stages, a whole range of approaches is presented in the scientific literature, among which one can single out the position of D. Strickland and A. Thompson, who substantiate the approach of determining the boundaries of stages by the essential tasks of management: determining the scope of activity and its strategic directions (attitudes); definition of strategic goals and ways to achieve them; formulation of a strategy, thanks to which it is possible to achieve the set goals, to obtain positive results of activities; implementation of the strategic plan; analysis

of the actual results of the enterprise's activities, evaluation of the implementation of the plan, its possible change [200].

M. Mescon offers an exposition of the following stages of strategic management: mission justification, allocation and declaration of strategic goals, analysis of the external environment, assessment of internal capabilities, analysis of strategic alternatives, choice of strategy, implementation of strategy, management and planning, implementation and control of the implementation of the strategic plan, evaluation of strategy [194].

Strategic management in the works of V. Miklovd, N. Kubina, and their co-authors is presented as a process that is in constant motion and is a closed cycle, which involves a constant return to the stages that have been passed but have undergone qualitative changes; In addition, according to the authors, the components of the strategic management process are not isolated, they are not only interrelated, but overlap in time [105, p. 27].

O. Revenko focuses on the role of strategic management in harmonizing the internal environment and external challenges. In his opinion, strategic management is aimed at creating the necessary conditions for quantitative and qualitative transformations and coordination of actions aimed at preventing the formation and elimination of contradictions that arise in the internal environment as a result of its interaction with the external environment [130]. Following the given approach, the essence of strategic management is disclosed through the identification of the state of the agri-food enterprise now, the determination of the desired future state, taking into account the challenges of the external environment, and the search for ways to achieve the planned result. These areas correspond to three main phases of strategic competitiveness management: strategic analysis, strategic choice (or strategic planning itself), and strategy implementation.

Strategic management of the development of agri-food sectors can be defined as a concept of an integral approach to their activities in the context of the functioning of individual enterprises, which allows to compare the goals of enterprise development, which reflect the process of its adaptation to the

environment, including in the world market (i.e., actions related to the avoidance of threats and the development of opportunities), with the production and resource potential that is available and used at the moment; carry out the process of formation (development) of a set of strategies following the internal capabilities of sectoral development in achieving the set tasks; to organize and intensify activities for the implementation of adopted strategies, especially corporatization, capitalization, clustering on innovation and investment principles [17].

It should be noted that the implementation of strategic management is aimed at solving the following essential problems:

1) problems related to the implementation of the mission of the functioning of industries by ensuring the interconnection of goals, resources, and results;

2) problems related to elements of structure, location, and organization;

3) problems related to external factors.

It is possible to distinguish varieties of strategic management of the development of agri-food sectors and their subjects (at the micro level). In a broad sense, these are strategic planning, management based on the choice of strategic positions of competitiveness, management of strategic tasks, and management through implementing emergency measures for developing industries and individual enterprises.

Analysis of the current situation in which the sectoral activity is located requires constant monitoring of the external and internal environment of the agri-food sector to recognize and adequately respond to all the changes that are taking place and the problems and trends accompanying them. The peculiarity of the strategic management of the development of the industry is its orientation towards the future, which involves the formation of a detailed vision of the mission of the development of the industry, the definition of goals, and the implementation of which will ensure the achievement of competitiveness. The transition from planning to specific activities is a purposeful process of implementing a strategy for managing the development of agri-food sectors, accompanied by the performance of control functions, as well as adjustment of decisions made at

previous stages. Based on the analysis of the strategic management of the development of agri-food enterprises, we offer the author's vision of the algorithm of strategic management of competitiveness (Fig. 1.1), which includes the following components (stages):

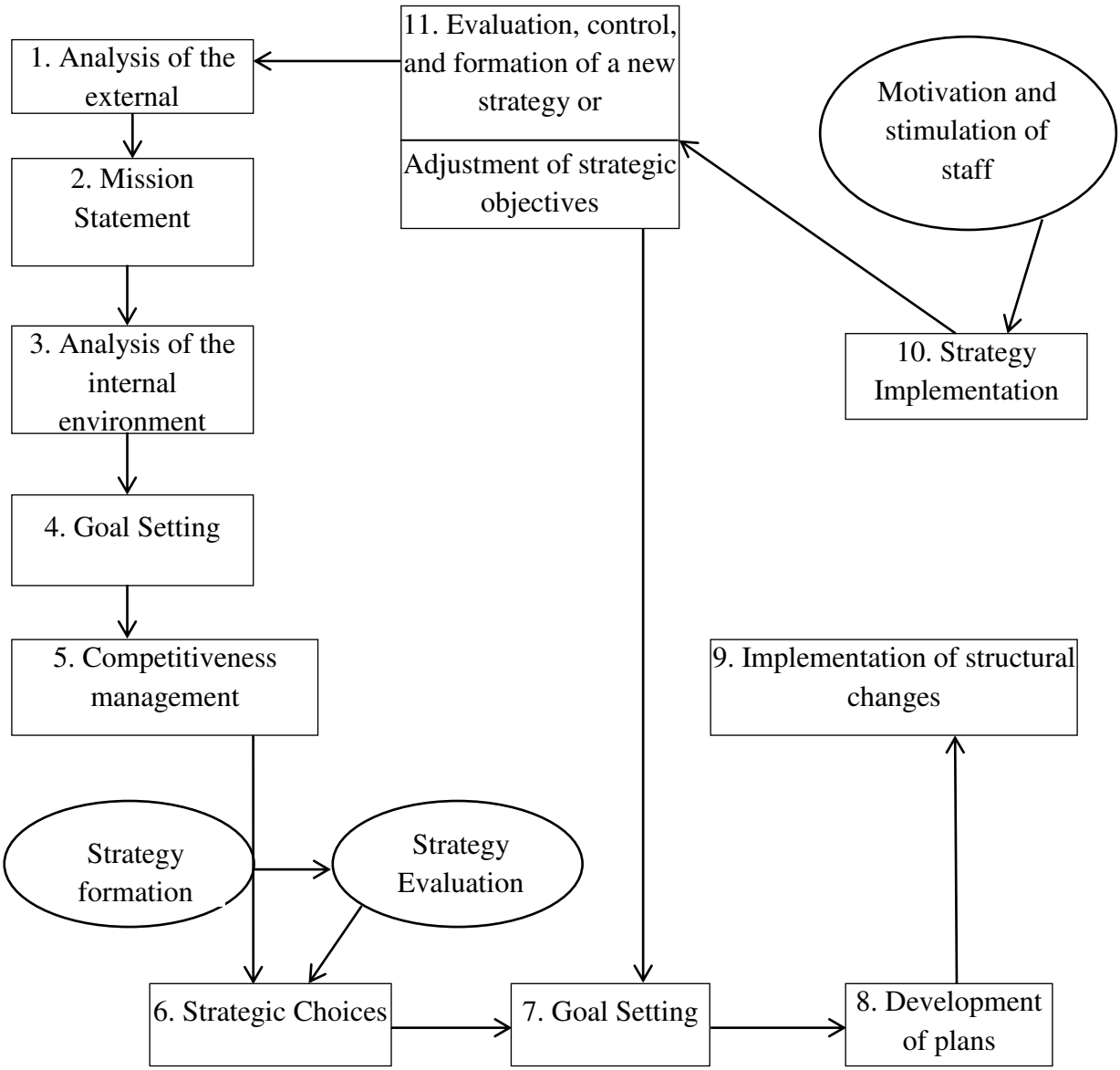


Fig. 1.1. Algorithm of strategic management of competitiveness of agri-food enterprises

1. Analysis of the external environment.
2. Mission statement.
3. Analysis of the internal environment.
4. Formulation of goals for competitiveness management.

5. Strategic choice because of strategy formation and evaluation.

6. Setting goals.

7. Development of plans.

8. Implementation of changes based on motivation and stimulation of personnel.

9. Control, evaluation of the result

10. Adjustments that can apply to any previous stage.

The initial stage of the process of strategic management of the development of agri-food sectors is the analysis of the external environment. This view is based on the following arguments: the external environment is characterized by uncertainty and variability; it does not provide precise signals; Incompleteness of information limits the performance of the prognostic function by management.

It is an indisputable fact that in the current time, there is a generation and rooting of new forms of existence of economic entities. The characteristic features of the new image of the economic system are [32, p. 68]:

- instability, which manifests itself in the rapid change of technologies, products, and communication channels;

- uncertainty – with the globalization of the economy, there are many factors of uncertainty that complicate the process of finding optimal solutions for effective management;

- complexity – a wide variety of management tools creates obstacles to their application; modern entrepreneurs try to use well-known and understandable management tools, which do not take into account modern development trends;

- ambiguity – the results of economic management do not always clearly and correctly reflect the situation, and the strategy of pushing competitors and partners to the wrong opinion is often used.

The current state of the external environment has become an objective basis for the assertion that threats and challenges of the external environment can be leveled only under strategic management based on weak signals. The ideology of the method of control by weak signals assumes that any adverse phenomena or the

prospect of an increase in opportunities do not arise suddenly but are caused by the appearance of predictor signals or "weak signals". Weak signals are early and inaccurate signs of the onset of essential events, which over time become more reliable and turn into solid signals [155].

The level of instability determines the use of strategic management methods, which include management based on anticipation of changes (strategic planning, choice of strategic positions) and management methods based on flexible emergency solutions. The methodological aspect of the early warning system concentrates on the methods of selection and analysis of selected areas of observation in the external environment, as well as the determination of observation time intervals that will give the most accurate results. Instead, the organizational aspect concentrates on the effectiveness of information flows designed to support decision-making [**Ошибка! Источник ссылки не найден.**].

Thus, the analysis, forecasting, and monitoring of the external environment is the basis on which the model of strategic competitiveness management is built. Assessment of the external environment needs to be carried out systematically. With this approach, the degree of control over changes in the external environment increases. Analysis of the environment should accompany each stage of the system process for strategic management. It should be noted that the presented tactics ensure compliance with the methodological principles of modern strategic management of the development of processing enterprises, which consist of building a strategy from the future through the past to the present (forecasting – analysis – monitoring). The results obtained during the analysis of the external environment represent the information basis for the formulation of the mission of the agri-food sectors.

The study of the immediate environment of agri-food enterprises is aimed at analyzing the state of those components with which they are in direct interaction, which traditionally include sources of raw materials, processing capacities (for raw materials), competitors, intermediaries, investors, and consumers. All of them are included in the segment of stakeholders of direct influence who are not subordinate

to the subject of agri-food production while being associated with it using levers for the exchange of resources or tools of persuasion. Identifying the main trends in the transformation of investors' behavior allows us to conclude that the role of non-economic factors in making investment decisions is increasing. Investment management companies, as managers of significant amounts of capital, consider the impact of companies' activities on society.

The main goal of the development of agri-food sectors is the formation of competitiveness of economic entities at the level of the world and national markets, which provides for the effective use of production capacities and own potential, a justified innovation and investment policy, and a strategy for internal and intersectoral development. The implementation of these priorities forms the basis for defining the mission of the agri-food sector, which, at the subsequent stages of strategic management, will act as a vector of movement and a measure of the success of the process. Strengthening the processes of globalization requires adaptation to the change in the trajectory of formatting the socio-economic space in the plane of a systematic combination of ecological and humanistic ethics. This necessitates the implementation of components of sustainable development in the strategy and tactics of sectoral management and transformation of the activities of agricultural and industrial enterprises of the agri-food sector on the principles of ESG (Environmental et al.). The main guidelines of the strategy are [91]:

– environmental responsibility – the desire to mitigate the negative impact on the environment and natural resources;

– social justice and equality – meeting the needs of all members of the community, protecting the rights of employees, establishing high standards of corporate responsibility;

– risk and opportunity management – both external and internal factors that may affect the company's strategy and activities;

– innovation – finding new solutions that can help minimize the negative impact on the environment and society;

– compliance with agreed standards – compliance with laws and regulatory requirements, as well as compliance with agreements and arrangements with partners and competitors;

– taking into account the interests of stakeholders – regarding the environmental, social, and economic consequences of the company's activities and its possible contribution to solving the problems of society;

– sustainability and sustainability – sustainable development over several years, with consistent implementation of an ESG strategy that protects the environment, supports social stability, and promotes economic progress.

The elements of the internal environment of the agri-food sector, which we consider essential components of the formation of the potential for gaining competitiveness, include:

- the resource component, including human resources as a significant component of the potential in the conditions of an innovative economy;
- adaptation capabilities for the implementation of technological and organizational changes;
- intangible factors, such as "social capital".

Determination of the goals of industries and sectoral entities of the agri-food sector should consider market conditions based on which perspective plans and programs, business plans, innovation, and investment projects are developed; rely on an objective assessment of the means and resources to achieve goals; identification of risks and constraints. Strategic management can be considered as a dynamic set of interrelated management processes. These processes logically follow (or follow) one another. At the same time, there is stable feedback and, accordingly, the reverse impact of each process on the others and their totality through implementing the control function based on the analysis of the results obtained. This is an essential feature of the strategic management system. The conceptual scheme of strategic management of agri-food sectors is shown in Fig. 1.2.

The concept of strategic competitiveness management involves the use of practical tools and methods for the development of agri-food sectors ("goal tree," "tuple of preferences," "strategic set," strategic plans, projects and programs, strategic planning, and control, innovation and investment projects, energy production cycles, fuzzy modeling, scenario forecasting, etc.) [49].

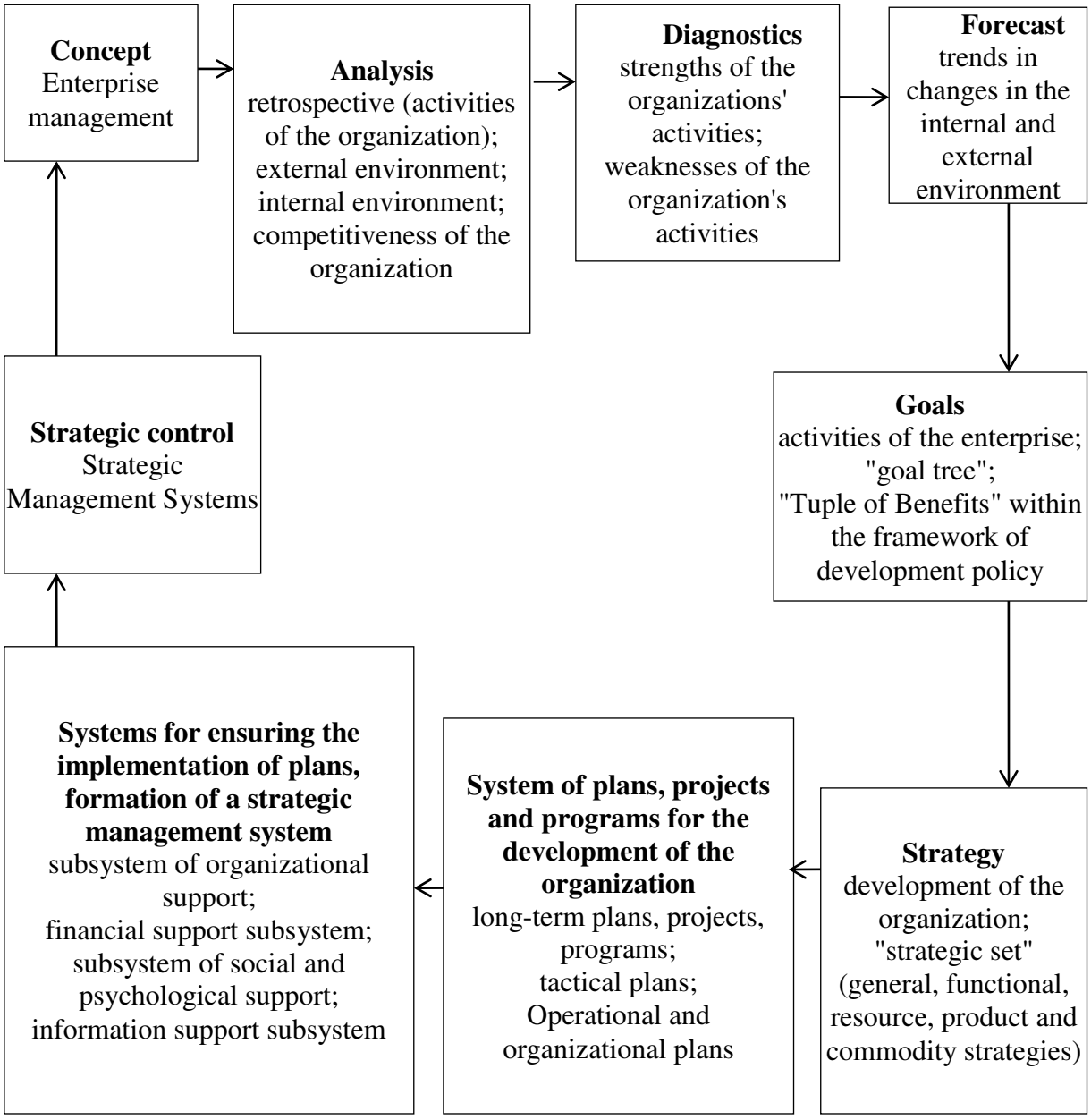


Fig. 1.2. Conceptual scheme of strategic management of agri-food sectors and their competitiveness

The industry's competitiveness is formed by the business entities that are part of it. Among them, there can be different types of enterprises - large, medium,

or minor, and they can be at different stages of development and occupy different niches in the market. Accordingly, different strategies are developed to increase the company's competitiveness depending on its characteristics. The success of business entities depends on the internal efficiency of operational processes, the profitability of production, the quality of personnel and management, the cost of production, and the quality of the final product, as well as the presence or absence of state, including budgetary, support, as well as the impact of regional, interregional, and global economic conditions.

However, there are undoubtedly objective factors in the industry that affect overall competitiveness and are framework principles and requirements. Such factors include

- uniform product quality standards,
- certification processes for production systems and technologies,
- unification of operational processes,
- similarity in the stage of development or size,
- the form of organization of business entities.

These factors are essential in ensuring sustainable and effective competitiveness of the industry.

Of great importance is the use of uniform management decisions for industry entities that have identical economic conditions or market positions, the organization of monitoring of the development of the industry and relevant markets, the development of uniform marketing strategies for the functioning of agri-food industries, the training of personnel and the implementation of their professional development, the justification of the rules of corporate conduct and social standards for employees. General Industry Significance: They also have common strategic management principles for the modernization of production, implementation of innovation and investment policy, capitalization, financing and refinancing, clustering, integration, and cooperation.

Strategic management of agri-food sectors, based on the goal of increasing their competitiveness, is based on the following conceptual principles:

1. The purpose of modern branches of the agri-food sector is the production of competitive products or the provision of relevant services, the achievement of which ensures the implementation of the goals of increasing profitability ensuring financial and economic stability. There are two directions for the development of strategic management: management based on anticipation of changes (strategic planning, choice of strategic positions), which is a logical development of strategic planning and consists of two complementary subsystems (subsystems of analysis and planning of strategy and subsystems of strategy implementation); Management based on flexible emergency solutions, real-time strategic management - solutions to unexpectedly emerging strategic tasks. The latter is typical for industries where changes in the external environment occur with high frequency and are unpredictable. In the process of development in the conditions of market competition, enterprises are forced to simultaneously deal with the clarification of strategy and the solution of urgent strategic problems.

2. The purpose of strategic management is to promote development, which involves not only changing quantitative parameters but also improving qualitative characteristics. For example, among the critical strategic decisions are the adoption of decisive steps to restructure the production enterprise, the use of new resources, the introduction of innovative products and technologies, and the entry into new markets. An essential element is also the strategy of corporatization in the industry, the growth of capitalization, and the integration of production. Various processes can be considered in this joint strategic activity, including mergers and acquisitions policies, production restructuring, or the use of financial levers in order to increase sustainability and ensure the sustainable development of the industry with the prospect of economic growth.

3. Strategic management is based on a comprehensive analysis of the potential of agri-food sectors. On the other hand, increasing the potential of this sector is a product of strategic management. In a broad sense, the industry's potential consists of resources and sources of their replenishment, production, financial and economic relations, location of business entities (this aspect is

essential for the agri-food sector), and the organizational system. In the context of the information economy and a highly competitive environment, the sectoral potential needs qualitatively new content in the form of information and innovative components.

4. Signs of strategic management are a flexible response to impulses of changes in the external environment, implementation of timely changes in the organizational structure and territorial conditionality of the industry, the high role of human capital, customer orientation, constant monitoring of market conditions; long-term planning horizons; considering the aggregate array of accounting, financial, statistical data, and not its components. In this context, attention is focused on the need to collect and apply strategic information bases. Analysis, interpretation, and application of information for strategic decision-making allow us to determine the content and sequence of actions for changes in the industry and the market by reducing the uncertainty of the situation. This activity helps to predict the consequences of the decisions made, influencing the situation with the appropriate allocation of resources, the establishment of effective connections and the formation of strategic behavior of personnel, the content of operational processes, pricing, logistics policy, etc.

5. The concept of strategic management of competitiveness, which is based on strategic thinking, is based on a combination of management theories (in particular, system and situational analysis, target, and innovative approaches to management, etc.). The industry, as well as the enterprise, is considered as an open socio-economic and material system. The use of only one of these principles does not allow to achieve the desired results – the development of enterprises and industries in the long term.

The presented characteristics do not exhaust the essence of the concept of strategic management of competitiveness but provide an opportunity to determine its most essential components and principles of implementation aimed at achieving and maintaining high competitiveness.

Given the need to maintain the strategic orientation of the agri-food sector, the strategic management of their competitiveness turns into a continuous and dynamic process. Therefore, episodic analysis and diagnostics of production and economic relations cannot be the basis of such a process since they provide information limited to a specific period.

It is crucial to consider that the competitive environment forms new requirements for industries and enterprises. They are conditioned by the need to respond flexibly to changes in the market situation, which only sometimes contributes to the economic growth of business entities. Researchers attribute most of the object markets of the integral agri-food market to markets close to pure competition. The strategic direction of development of agricultural enterprises in these conditions is increasingly chosen the transition to the market of monopolistic competition based on inclusion in the product line of production of niche goods, as well as the development of the segment of environmentally friendly products that meet the principles of sustainable economic development.

The peculiarities of the essential content of individual elements of the agri-food segment, namely processing enterprises, determine the tendency of formation of buyer's markets with an oligopsonic competitive structure, which tends to be monopsonic in the markets of certain goods in the territorial context (in regional markets). The primary tool for the implementation of dominance is the available opportunity for buyers (enterprises of the processing industry) to set prices and regulate the volume of products.

Suppliers in the agricultural market are companies that provide the market with seeds, pedigree livestock, etc. Let us consider the state of competitive content of the market to determine the features of adaptive development. The markets mentioned above in Ukraine tend to have monopolistic tendencies. A similar situation is typical for the global market since each large company in this segment specializes in selecting varieties for certain natural and geographical zones [Kozak, K. B. (2020). Mechanisms of adaptation of agro-industrial enterprises to the trajectory of sustainable economic development. Economic Space, (162), 30-36.].

The competitiveness of agri-food enterprises depends on the ability to predict and change the structure of production and management, to develop and introduce new types of products into production, and to reasonably plan production volumes for the entire range of goods, investments, and income. Strategic management of competitiveness has limitations, like any tool for influencing the object of management (Table 1.1).

So, as shown in Table and Figure 1.1, sectoral constraints on competitiveness are objective and subjective. The incompleteness of the information is objective, which is due to the specifics of the manifestation of the external environment in the role of an exogenous factor of sectoral development. All other restrictions are subjective. This fact should be attributed to the arguments regarding the exclusive role of human capital in the system of factors of production and the subject-object element of the system of strategic Competitiveness management.

Table 1.1

Limitations of strategic management of competitiveness of agri-food sectors and ways to overcome them*

Restriction	Ways to overcome
Lack of a systematic approach to the formation of strategic management of competitiveness of industries and business entities	Implementation of a dual management system: the strategic level of the industry and the strategic level of enterprises. Application of strategic controlling. Motivation for mastering strategic management. Formation of strategic behavior.
Competition of strategic and current activities and their inconsistency	Development of a system of strategic plans, including strategic budgets. Development of strategic activities with the help of a system of planning, organizational and socio-economic measures
Lack or insufficient level of strategic information to manage sectoral development	Formation (strengthening) of analytical sectoral structures. Building systems for strategic monitoring and controlling of the external and internal environment
Lack of sufficient skills in strategic management based on modern methods (marketing strategies, financial restructurings, innovation and investment design)	Special training of management personnel, especially at the highest level, for comprehensive support of development strategies

Resistance to change in the form of "threat elimination", separation of powers, rights, duties and responsibilities, way of thinking and organizational and managerial industry rituals	Resistance management. Formation of strategic thinking and behavior

**Developed by the author based on [142; 146; 165; 176].*

At the same time, the general principles of human development form a strategy of transformational changes in its quality, which is long-term. It is essential to understand the futility of using coercive tools because human capital develops only in conditions conducive to the formation of creative beginnings.

1.2. Components and factors of formation of competitiveness of agri-food sectors

The existence of competitive relations is inviolably connected with the struggle of commodity producers to obtain more favorable conditions for the production and sale of goods to obtain maximum profit. In economic, scientific literature, and everyday life, this conflict of interest is called competition. The economic category of competitiveness is based on the concept of competition.

Competition (from the Latin "concurre" – to collide) is the struggle of independent economic entities for limited economic resources [29]. This is the process of interconnection and struggle of economic entities in the market, the purpose of which is to provide the best favorable conditions for the sale of their goods and services and to meet any needs of consumers. The concept of competition is so multifaceted that no universal definition covers it: it is the movement of capital, competition, as well as the method of management. The concept of competition, according to M. Porter, is determined by the following:

- rivalry of competitors already existing in the market;
- the emergence of new competitors;
- emergence of new competitive goods (substitutes);
- competitive ability of suppliers (sellers);
- opportunities for buyers [28].

The importance of each of the five factors varies and determines the effectiveness or risks of the activity. At the same time, it should be emphasized that business entities in the agri-food sector must overcome the negative and use the positive factors of influence of competitive forces for economic growth. A. Marshall, the founder of the neoclassical movement, believed that "competition ... is that one man competes with another, especially in the sale or purchase of anything [14]. McConnell, C.R., and Brew, S.L., define it as the presence of more independent buyers and sellers in the market and the ability for buyers and sellers to enter and leave the market freely [101]. A. Smith characterized competition as a behavioral category when individual sellers and buyers compete in the market for more favorable conditions for the sale and purchase of services [13, p.10].

The purpose of competition is to obtain the best conditions, favorable conditions, and maximum profit from selling goods (services). Competition ensures the interaction of supply and demand and balances market prices. Thanks to it, the expected price, demand, and supply of homogeneous goods and services are determined between sellers and buyers. Competition ensures the functioning of the price mechanism and regulates the share of society in production. Competition as a process can take the form of many specific actions of different actors.

The result of competition is, on the one hand, the strengthening of production and market relations and, on the other hand, an increase in the productivity of economic activity, an improvement in the quality of products and services, and a decrease in their cost and price. In our view, competition is based on at least two processes:

- rivalry between business entities (producers, intermediaries, suppliers);
- meeting the needs of end users and their changes.

Competition is a complex concept, and in the economic literature, there are three approaches to its definition [14].

The first approach is based on the understanding of competition as a particular form of fair economic struggle in which, all things being equal, the more

skilled, capable, and enterprising side wins the competition. The goal of the participants is the same – to score the highest for themselves and get ahead of their rivals.

The second approach is inherent in classical economic theory, where competition is considered a natural part of the market mechanism, coordinating the activities of the subjects of relationships. This mechanism is the force that ensures the interaction of supply and demand and balances market prices. As a result of competition between sellers and buyers, goods of the same name (of the same type) establish a standard, so-called equilibrium price, which is theoretically expressed as the intersection of a particular supply and demand curve depending on the quantity of goods supplied.

A third approach to the definition of competition appeared with the development of market theory, where competition is not so much competition as the extent to which general market conditions depend on the behavior of individual market participants. Competition is the criterion that determines the type of market, and there are four of them: the market of perfect competition, monopolistic competition, oligopoly, and monopoly.

For an enterprise, competition is the process of managing its financial and organizational capabilities in order to achieve victory in the fight against competitors.

Under market conditions, it exists constantly, provides the best opportunities to meet the various needs of buyers of goods and services, stimulates commodity producers to search for new ways to improve their production, improve the quality of goods and services, reduce costs and prices for products, create and strengthen a strong business reputation among consumers. These actions at the level of industries and types of agricultural activity are accumulated in the form of the following manifestations:

- formation of the material and technical base of production, capital, and labor resource potential (labor force);

- organization of operational processes, supply of raw materials, materials, and semi-finished products, as well as interaction with other production, credit and financial and design organizations and institutions on a paid basis;
- creation of competitive products and services;
- sales of products and services, which includes measures to determine the volume, time, and place of their sale, logistics services, marketing strategies, and constant monitoring of relevant markets;
- creation of financial and investment means at the expense of profit and their use for the expansion of production, its modernization, increase of profitability, and competitiveness in the future [29].

The competition gives rise to such an economic concept as competitiveness, a multidimensional concept that combines various aspects and factors of efficiency and development of management objects. S. F. Pokropyvnyi notes that the concept of competitiveness should be understood as the ability to effectively carry out economic activity and ensure the achievement of a profitable result, considering the conditions of competitive market [62]. S. Khaminich believes that competitiveness is a multifaceted and multilevel category, which in market conditions becomes an integral characteristic of an economic entity in terms of its compliance with objective (external to it) economic conditions [87, p. 6].

To date, there is no single definition of the concept of "competitiveness", which is due to the variety of approaches to understanding its essence. Competitiveness expresses the functional results of applying many competitive factors at different levels and market segments.

Certain peculiarities exist in interpreting competitiveness at the functional-sectoral, regional, and other levels. The competitiveness of a country or its economy stands out. The following hierarchy in the strategic management system is the competitiveness of a region or industry. They are formed by the competitiveness of individual enterprises in the region or enterprises in the industry. Finally, the competitiveness of enterprises at the level of strategic management is decisively influenced by the competitiveness of goods or products.

It should be noted that there are close internal and external links between the concepts of competitiveness at different levels. The competitiveness of a product, raw material, or commodity can characterize the competitiveness of the company itself, its financial and economic position, style, and business reputation. However, this is possible only if the structure of the processing of raw materials or the sale of products is such that competing goods provide a significant share of the most extraordinary income and profits. As the competitiveness of countries, industries, regions, and industrial and agricultural enterprises in the processing of raw materials and production of products increases, various general and partial indicators of product competitiveness continue to improve.

Bilateral or multilateral relations exist at all levels of competitiveness. At the same time, the competitiveness of lower-level objects is a factor in the competitiveness of all top-level objects. For their part, higher-level objects create conditions for competition between lower-level objects. However, increasing the competitiveness of an object at one level only sometimes contributes to increasing the competitiveness of an object at another level. For example, the processing of raw materials can be resource-intensive, high-cost production, and this, in turn, in market conditions, inevitably leads to a decrease in profits and deterioration of the financial condition of business entities and the industry. In this case, the manufacturer's product becomes less competitive.

The most critical component of product competitiveness is its quality, but these two concepts need to be clarified. As a rule, quality parameters consist of the product's properties and are formed by the capabilities of manufacturers, in turn, competitiveness. This is a set of attributes and subjective properties of consumers. In this case, heterogeneous goods satisfying the exact needs can be compared when assessing the level of competitiveness.

The most common approach to calculating the competitiveness of a product, taking into account quality, is the calculation of an integral indicator, which includes group indicators for technical, economic, regulatory, and sometimes organizational parameters (2.1) [66, pp. 138-142; 102, 45, pp. 41-43].

$$K = I_{np} \times \frac{Itp}{Iep} \quad (1.1)$$

where

K – is an integral indicator of the competitiveness of the product;

I_{np} – group indicator according to normative parameters;

Iep – is a group indicator for economic parameters;

Itp] is a group indicator for technical parameters.

The choice of the primary benchmark for comparison, to some extent, depends on the accuracy and correctness of the result of the competitiveness assessment and the subsequent decisions made to improve the product or service. The basis for comparison can be the need for buyers, a hypothetical sample, or a group of analogs. In fact, in practice, competitors most often use products.

Since indicators can be evaluated in different ways, when evaluating according to normative parameters, a single indicator can have only two values – 1 or 0. At the same time, if the analyzed products meet the mandatory norms and standards, the indicator is equal to 1. If the product parameter of the norms and standards is not met, then the indicator is 0. When evaluating by technical and economic parameters, a single indicator may be greater than or equal to one if regulatory and technical documentation, special conditions, orders, and contracts establish the fundamental values of the parameters.

The calculation of the group indicator according to the normative parameters is carried out according to the formula (2.2):

$$I_{np} = \prod_i^n g_{npi} \ , \quad (1.2)$$

where

I_{np} – is a group indicator of competitiveness according to regulatory parameters;

g_{npi} – is a single indicator of competitiveness according to the i-th normative parameter.

A distinctive feature of this formula is that if at least one of the single indicators is equal to 0, which means that the parameter does not correspond to the

mandatory norm, then the group indicator is also equal to 0. At the same time, the product will not be competitive.

The calculation of the group indicator by technical parameters (except for normative ones) is carried out according to the formula:

$$Itp = \sum q_{tpi} \times a_i \quad (1.3)$$

where Itp – is a group indicator of competitiveness in terms of technical parameters;

q_{tpi} – is a single indicator of competitiveness for the i-th technical parameter

a_i – is the weight of the i-th parameter in the general set of n technical parameters that characterize the need.

The obtained group indicator Itp characterizes the degree of compliance of this product with the existing need for all technical parameters. The higher it is, the more fully the needs of consumers are satisfied.

The calculation of the group indicator by economic parameters is based on the summing up of all consumer costs for the purchase and consumption (operation) of products. The calculation of the group indicator by economic parameters is carried out according to the formula.

$$Iep = \frac{3}{3_0} \quad (1.4.)$$

where

Iep is a group indicator for economic parameters;

3, 3_0 – the total costs of the consumer following the evaluated product and sample [66].

Summing up the assessment of the competitiveness of the product and other scientific works, it can be concluded that the competitiveness of the product is determined by the following main factors: price, quality, level of after-sales service, advertising effectiveness, system marketing, timing and technology of production, sales volume. There needs to be more than just assessing the

competitiveness of products to conclude the competitiveness of the enterprise and the industry.

Competitiveness of an enterprise is the level of its competence with other competitive companies in the accumulation and use of the potential of its components: technology, resources, management (incredibly strategic current planning), skills and knowledge of personnel, etc., to improve product quality, increase productivity and increase profitability [5, p.29].

An enterprise's competitiveness can often be assessed by comparing business conditions, resources, and performance with a specific group of businesses considered rivals. There are many ways to analyze corporate competitiveness, which is due to the ambiguity of the existing methodological approaches in these studies.

Methods that are more often used in practice to conduct an assessment analysis of the competitiveness of an enterprise include SWOT analysis, SNW analysis, PEST analysis, etc. [6; 10; 132].

PEST analysis is a popular competitive analysis tool that helps to understand the political, economic, social, and technological factors that affect an enterprise's performance. By scanning these external factors, it is possible to identify opportunities and threats, as well as consumer needs and preferences.

However, PEST analysis also has some challenges and limitations. One of the biggest challenges of PEST analysis is the collection and analysis of relevant and reliable data on external factors. It is necessary to gather information from various sources, such as government reports, industry publications, market research, media, surveys, etc. In turn, the main features of PEST analysis are obtaining strategic foresight and innovation. By scanning the external environment, a business can anticipate future trends, changes, and disruptions that may affect it and spot new customer needs, preferences, and expectations that may create new market opportunities or challenges. This can help businesses adapt their strategy, products, services, processes, and operations to stay ahead of the competition and maintain their advantages.

SWOT stands for strengths, weaknesses, opportunities, and threats. When performing competitive analysis, enterprises analyze through the prism of these four criteria. Strengths describe how the company excels and what distinguishes it from competitors: a strong brand, loyal customer base, strong balance sheet, unique technologies, and so on. Weaknesses prevent the organization from performing at an optimal level. These are areas where a business must improve to remain competitive: a weak brand, above-average turnover, high debt levels, an inadequate supply chain, or a lack of capital. Opportunities refer to favorable external factors that could give an organization a competitive advantage: lower tariffs for producer-exporters. Threats refer to factors that can harm an organization: drought, rising material costs, increased competition, limited labor supply, etc.

SNW analysis (Strength Position; Neutral Position - Neutral Position; Weakness Position) With the help of this method of analysis, you can assess the level of the company's competitive position in the market while assessing its strengths, neutrals, and weaknesses. This method is effective in assessing potential opportunities. The list of studied factors is formed by the enterprise independently, depending on the specifics of its activities, but also includes risk factors. SNW analysis is a reasonably effective way to determine the competitiveness of an organization, in which it is best to choose the average market condition for a particular situation as a neutral position; this will allow to identify the most powerful side of the organization's activities and improve it, that is, better position the company in a particular market. SNW analysis of an enterprise examines the following aspects of the enterprise environment: the primary business strategy of the organization, the competitiveness of goods, products, or services in the relevant market, the availability of certain funds, brand effectiveness, innovation, and employee work, marketing, and production level.

Another standard analysis of the competitiveness of enterprises is the method based on the theory of effective competition [6; 74]. According to this theory, an enterprise is the most competitive if the work of all services is organized

in the best possible way. The primary tool for analyzing competitiveness is to compare the state of the enterprise with the same indicators of competing enterprises or with the industry average.

Based on the calculation of indicators of economic performance, financial condition, and efficiency of the sales organization, the coefficient of competitiveness of the organization is determined. Indicators are calculated based on actual data and forecast balance. After calculating these indicators, it is advisable to convert them into relative values (points). To do this, they are compared with the fundamental indicators, which include the values of the previous period. The indicators must be converted into a 15-point scale to use relative values. The value of "5 points" is given to an indicator that is worse than the baseline; "10 points" – at the primary level; "15 points" – higher than the basic one. This method is convenient for use in the study of the competitiveness of an enterprise and covers the main areas of the organization's activities.

The main factors that determine the competitiveness of an enterprise include the company's strategy, the availability of material, labor, and financial resources, innovative potential, market share, and management efficiency.

The main factors influencing the level of competitiveness of an enterprise can be divided into groups, having considered the above methods: internal (micro-level factors) and external (macro-level factors). In turn, each group has its own set of elements of influence [96; 101]:

Internal elements include:

✓ technical and technological – factors that characterize production equipment, objects of labor, and technology in production. This group of factors is decisive mainly since the level of mechanization and automation of production, the introduction of modern technologies directly affects the efficiency of the enterprise;

✓ the organizational and management group contains factors that set in motion the technical and technological subsystem through the organization of

production and labor, the selection of personnel, the introduction of a progressive system of remuneration;

✓ financial and economic factors relate to effective resource management, profitability, and financial stability;

✓ social and psychological factors include the company's personnel, organizational culture, values, needs, and interests of employees. it is necessary to maintain a healthy moral and psychological climate in the team, to create normal working and leisure conditions for the development of the need for self-realization;

✓ the natural and geographical group of factors forces the company to build its logistics structure, constantly improve production technology, optimize transport schemes, reduce the energy intensity of production, etc.

The environmental group of factors consists of a whole range of technical and organizational tasks due to the need to improve the quality of water, air, land, etc., obtaining a high competitive status;

✓ the sectoral group of factors reflects the external conditions of the entity's activity, determining the ways to improve technology, organization, and management of production at enterprises;

✓ market factors include open access to resources and new technologies, product uniqueness, expansion of sales channels, and the effectiveness of sales promotion tools.

Elements of external influence include:

✓ political factors in the functioning of enterprises depend on the laws and regulations of the country (lobbying interests, raising or lowering taxes, bureaucracy, level of corruption, regulation of competition, government stability and related changes, government participation in trade unions and agreements, import restrictions on the quality and quantity of the product, etc.);

✓ economic factors related to goods, services, and money (inflation, interest rates, exchange rates, consumer incomes, and purchasing power, economic growth, and unemployment);

✓ socio-cultural factors are larger forces within cultures and societies that influence thoughts, feelings, and behaviors (intercultural differences, regional differences, religious beliefs, attitudes, etc.);

✓ technological factors refer to how new practices and equipment can affect business (information and communication technologies, automation, e-commerce, etc.);

✓ legal factors are external factors that relate to how the law affects how businesses operate and customer behavior;

✓ environmental factors. Businesses should be environmentally friendly and reduce resource consumption (conservation of natural resources, environmental protection, waste disposal, production of alternative energy, production of environmentally friendly food).

Competitiveness of the industry is the presence of a sufficient number of enterprises capable of producing goods and services corresponding to the demand of the domestic and foreign markets and the ability to create conditions for increasing their competitive potential [101].

Kovalets B. believes that the leading indicators of the industry's competitiveness are the indicators that characterize the state of the components of its competitive position. In particular, he refers to them as the provision of enterprises in the industry with resources (labor, raw materials), investment attractiveness (the ability to attract capital in the domestic and world markets), a well-chosen development strategy (management system and competition policy), demand for manufactured goods and services (the ability to meet expectations consumers). Accordingly, the determinants of the industry's competitiveness will be the factors influencing the value of these indicators in [75, p. 340].

The concept of "competitiveness", of course, should be used concerning the agri-food sector. It can be defined as the possibility of effective economic activity and its practical, profitable implementation in a competitive market. The whole range of tools and resources available in the sectoral structures ensures this implementation. Thus, the competitiveness of agri-food sectors is the result of the

production and economic activity of their enterprises and organizations, which reflect the efforts of all sectoral structures without exception, as well as the ability to respond to changes in market conditions, the elasticity of demand, dynamics of supply and its volumes.

The process of analyzing and increasing the competitiveness of the agri-food sector can be divided into stages:

1. To form a group of strategic agri-food enterprises that can increase the competitive potential of the industry;

2. Segment the market, existing and potential consumers, and form their needs;

3. To calculate the competitiveness of goods of these enterprises as a factor in assessing the level of competitiveness of the enterprise;

4. To analyze the competitiveness of enterprises and identify the main factors influencing the competitive environment, which will be the primary determinant of assessing the competitiveness of the industry;

5. To develop a strategy for improving the identified factors of formation.

Among the indicators that determine the level of competitiveness of agri-food sectors are:

- an indicator of the rational use of processing and production capacities of business entities;

- reliability indicator (shelf life);

- ergonomic indicators (minimum labor costs and simplicity of technological processes in the processing of raw materials);

- indicators of product transportability and logistics efficiency; safety metrics.

The competitiveness of agri-food sectors is determined by qualitative and quantitative factors, which can be quite fully characterized using a system of appropriate quantitative, natural, cost, and relative indicators.

We believe that determining the competitiveness of agri-food sectors is essential not only for the quantitative assessment of analysis and management

indicators but also for strategic planning and forecasting of the competitiveness of industries, identifying the advantages and disadvantages of their activities in a competitive environment, consolidating, and strengthening the former, weakening and eliminating the latter. Identification of sectoral reserves for increasing the competitiveness of agri-food sectors is carried out based on the assessment of their resource provision, social role, and importance of products in the market.

The competitiveness of industries and activities is assessed by a set of qualitative indicators, which makes it possible to analyze the competitiveness indicator and determine the impact of each analytical unit on the formation of the general indicator of competitiveness of economic entities. The first direction of analysis of the competitiveness of agri-food sectors is the decomposition of this indicator into functional and structural units of production (supply, own production, sales), each of which is a particular center for the formation of costs and corresponding profits, as well as their management.

Such an analysis can be carried out in managing the competitiveness of industries or their large enterprises. This will allow us to assess the impact of each unit or link of expanded reproduction on the formation of the overall competitiveness indicator. Another direction of analysis of the competitiveness of agri-food sectors and their economic entities for the processing of raw materials is the decomposition of the indicator of competitiveness in terms of profitability in the context of cost components. The study of competitiveness based on such a methodical approach allows us to analyze the factors influencing the financial and economic efficiency of activities in the industry. This analysis, in turn, allows us to identify ways to increase the competitiveness of agri-food sectors and develop measures aimed at achieving this goal.

Management of competitiveness of agri-food sectors involves a comprehensive assessment of the competitiveness of its enterprises, both those determined by industry specialization (primary) and auxiliary (if any) – logistics, sales, sales, advertising, transport, including specialized, social infrastructure, etc. This is because the industry, moreover, is a complex production-functional and

spatial-economic formation characterized by a significant scale of connections and location. As a result, even business entities within the industry are characterized by different competitive positions due to provisions regarding the sources of raw materials, sales markets, differences in operational processes, management, marketing strategies, scale of activities, and stages of the life cycle.

Essential factors in strengthening competition at the industry level include high requirements for the quality of processed raw materials and products, the emergence of individual requirements for finished products, high-quality processing facilities, etc. It is well known that introducing innovations contributes to increasing the competitiveness of activities. Innovation is an important mechanism and means of implementing technological innovations that ensure the development of agri-food industries. It should be noted that the increase in turnover and the financial stability of activities depend on innovations. Through innovation, agri-food sectors in the knowledge economy can increase their efficiency and competitiveness. The introduction of innovations contributes to higher profits. The use of more productive resources and raw materials, changes in technical schemes and systems, and technological modes lead to an increase in the flexibility of production, the replacement of obsolete types of products, and the gradual improvement of traditional technical means of production, their modernization.

We believe that business entities need to use high-quality raw materials, use new materials, as well as constantly improve their finished products, improve their quality, and reduce costs due to the increased requirements of the consumer market, the reduction of the life cycle of goods and services, and the intensification of competition. Of great importance is the improvement of management systems, marketing, restructuring and capitalization of industries, the formation of clusters, and corporate forms of production organization.

At the same time, the ability to introduce innovations depends on the profitability of the activities of the business entities themselves, sources of investment, financial resources, and their availability. It is necessary to emphasize

the increase in prices for high-quality raw materials and energy resources, as well as an increase in wage costs and other costs. This encourages the optimal use of the necessary resources and energy. Overcoming the dialectical contradiction between the introduction of innovations and their effect is the driving force behind the growth of competitiveness. It should be emphasized that the preferential depreciation policy, in combination with the policy of credit expansion, makes it possible to maintain an average level of financing and innovative support not only for current activities but also for their modernization. The state can only set limit standards that cannot be exceeded. Therefore, the use of small depreciation rates will allow business entities to invest their funds in projects that have a low rate of return.

Intellectual capital is also needed to ensure the innovative process of development of agri-food sectors, which in modern conditions becomes, along with production and finances, one of the most important strategic resources of all organizational units of the national economy and a determining prerequisite for the implementation of innovations. The purpose of introducing innovations at the sectoral level is to create long-term competitive advantages, i.e., innovation activity should be considered as the ability of industry and other economic structures and their personnel to adapt to market requirements constantly. This means the need for the formation of intellectual capital, the rational use of labor resources, and the creation of a system of training and advanced personnel training.

1.3. Methodological principles for assessing competitiveness at the sectoral level

In the conditions of an unstable external environment, which is inherent in modern market conditions of management, the problem of assessing the efficiency of agri-food sectors becomes hugely relevant. This is because, in the context of financial crises and instability, the results of specific management decisions should be calculated and have a positive effect. The existing methods for assessing the

efficiency of the agri-food industry are more suitable for use in stable economic conditions and only sometimes consider the impact of the micro and macro environment on the functioning of economic entities. Based on this, there is a need to improve the existing methods for assessing competitiveness to make sound management decisions to determine promising areas of activity, ensure financial stability, gain competitive advantages, and increase the overall efficiency of functioning. It is also necessary to pay attention to the fact that today, there is no single method for assessing the competitiveness of the agri-food industry, as well as its link – an agricultural enterprise. Indeed, due to several competitive factors, the activities of even the leading industries in the past were curtailed: agricultural engineering, light industry, and the production of many consumer goods. Solving the problem of returning to the market competitive products of these industries requires substantiation of appropriate methodological approaches to developing management strategies on a new basis.

Therefore, in our opinion, at the present stage of development of the domestic economy, it is necessary to determine not only measures to improve the efficiency of the agri-food sector but also appropriate methods needed to assess the effectiveness of their functioning, taking into account the relevant characteristics of enterprises.

For agri-food enterprises at the highest level of strategic management, there are the following areas of activity: production, supply, advertising, sales, personnel, financial support, financial results, competitors, and image (Fig. 1.3).

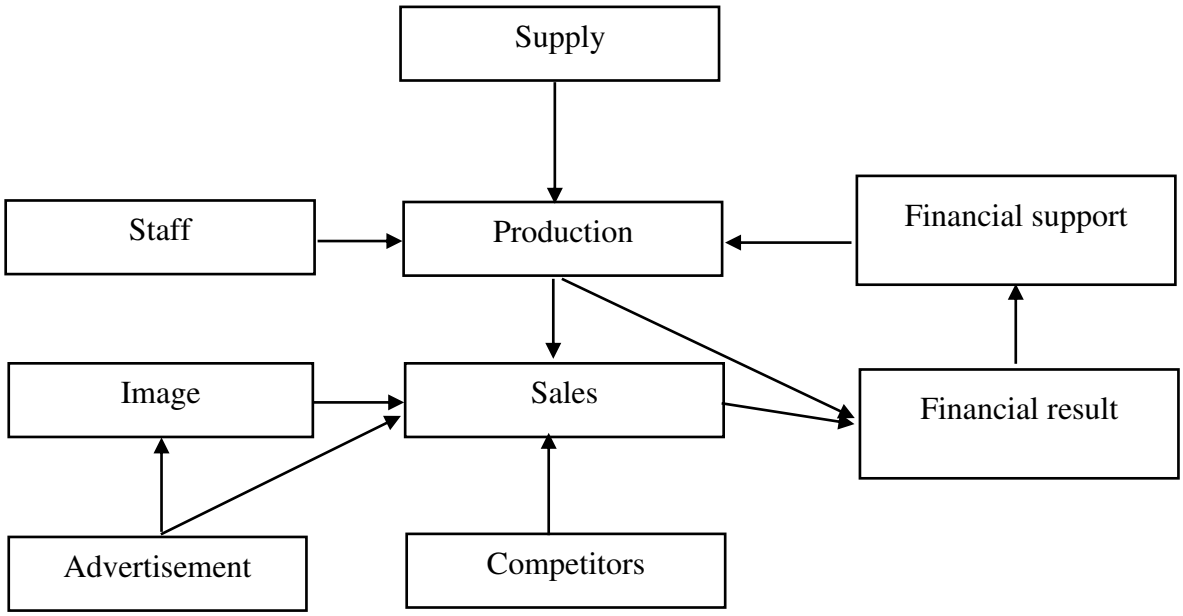


Fig. 1.3. Model for assessing the efficiency of functioning of industries by links of the reproductive process (developed by the author)

In the economic literature, it is proposed to distinguish four main levels of enterprise competitiveness (Table 1.2).

According to Kryuchkova Zh. V. methods for assessing the competitiveness of agrarian enterprises can be grouped into nine groups [83]:

1) methods based on the analysis of comparative advantage;

2) methods based on the assessment of the financial condition of the enterprise;

3) methods consisting in the study of the theory of effective competition;

4) methods based on the theory of product quality;

5) matrix methods;

6) methods for determining the competitive position from the point of view of the strategic potential of the enterprise;

7) integral methods;

8) benchmarking method;

9) other methods.

Table 1.2

The main levels of competitiveness of the enterprise

Level	Characteristics of the levels
First	They care only about the production of products, they do not pay attention to the consumer
Second	They strive to ensure that the company's products fully comply with the standards set by competitors
Third	They do not pay attention to the standards of competitors, but act as "trendsetters" in the industry
Fourth	When success in the competitive struggle is ensured, first of all, not by production, but by management, and the enterprise completely becomes a "trendsetter" in this market

Source: [30].

When assessing the level of competitiveness of agricultural enterprises, it is expedient to use methods that combine the ability to obtain specific numerical indicators based on reliable information and expert assessments that consider the peculiarities of agricultural production and the quality of agricultural products.

When analyzing the development of the economic system, three main functions are performed by the branches of the agri-food sector in the process of expanded reproduction:

1. Resources ensure economic growth and qualitative renewal of fixed assets on a fundamentally new, competitive basis at the level of both an individual industry and the national economy.

2. At the expense of resources, progressive structural changes in social production are carried out, which affect the most critical macroeconomic proportions.

3. With the help of the main activities, the achievements of scientific and technological progress are realized. On this basis, the efficiency of production is increased both at the micro and macro levels.

Among these functions, optimizing the most critical macroeconomic proportion – the ratio of accumulation and consumption – is essential. The rate of growth of production, the level of consumption of the population, and the efficiency of social reproduction depend on it.

It should be noted that the efficiency of the functioning of the branches of the agri-food sector should be assessed for each sphere of activity or linked to the reproductive process separately since they cover the main activities of the national economy, including material production and the social sphere.

According to the definition of Dobrovolska O.V. and Zubko O.V., the competitiveness of the industry is a generalizing, final indicator of the sustainable operation of enterprises in the industry, capable of providing a high level of income and employment in the region on a stable long-term basis in the conditions of internal and external competition, effectively using technological, human, and physical capital [41].

Assessing the competitiveness of an industry is the process of determining its quantitative and qualitative level, which gives a specific relative characteristic of the industry's ability to compete in a particular market. In turn, quantitative assessment most accurately characterizes the level of competitiveness, and qualitative assessment involves a certain degree of generalization of quantitative results by dividing them into intervals [41].

Kovalets B. [75, p. 340] believes that the leading indicators of the industry's competitiveness are the indicators that characterize the state of the components of its competitive position. In particular, he refers to them as the provision of enterprises in the industry with resources (labor, raw materials), investment attractiveness (the ability to attract capital in domestic and world markets), a well-chosen development strategy (management system and competition policy), demand for manufactured goods and services (ability to meet consumer expectations). Accordingly, the determinants of the industry's competitiveness will be the factors influencing the value of these indicators.

In the economic literature, the following main approaches to the assessment of the studied indicator can be traced:

1. A method based on determining the level of competitiveness of the industry as the arithmetic mean or weighted level of competitiveness of the enterprises that form it. Advantages: relative simplicity of calculations; during the

assessment, those enterprises that make the most significant contribution to ensuring the competitive advantages of the industry are identified. Disadvantages: significant labor intensity of obtaining objective assessments of the competitiveness of enterprises in the industry, high level of subjectivity of assessments obtained because of expert survey.

2. The method mentioned above is slightly modified – instead of indicators of the competitiveness of enterprises in the industry, indicators of efficiency of certain aspects of cluster activities are determined. The advantages and disadvantages are like the first method.

3. The method proposed by M. Porter is based on comparing export opportunities of the national economy with world exports. Advantages: considers the factor of international competition relative simplicity of calculations, based on objective assessments. Disadvantages: in the process of evaluation, it is not possible to identify the reasons (main determinants) for the competitiveness of a particular industry.

4. A method based on determining the level of competitiveness of the industry as an integral indicator of several parametric indicators of efficiency of various aspects of the industry. Advantages: there is a possibility to choose the studied factors of competitiveness at the discretion of the researcher, which makes it possible to take into account the characteristics of the industry, the focus on taking into account the efficiency of the entire industry as a system, a high degree of objectivity of assessments, during the assessment the main entry barriers to entry into the industry are identified, the ability to predict the value of the indicator of competitiveness of the industry for the future. Disadvantages: the subjective factor in the choice of indicators to be evaluated can distort the actual situation in the industry [12].

Having analyzed several scientific papers that present the existing methods for assessing the efficiency of the functioning of the branches of the agri-food sphere, which are due to the specifics of the main types of activity, a classification

of methods for assessing the efficiency of the functioning of the branches of the agri-food sphere is carried out. The latter is presented in Table. 1.3.

Table 1.3

Features of methods for assessing the efficiency of the functioning of agri-food sectors *

Method/Author	Features of the valuation method
Overseas School	
Calculation of relative efficiency (labor productivity) and production efficiency / Mescon M.Kh., Albert M. [194]	The generalizing indicator cannot fully characterize all the activities of the agri-food sector, therefore, it is important to consider the indicators used in this assessment method as components of the totality of estimated performance indicators.
Balanced Scorecard / Kaplan R., Norton D. [190]	It cannot be fully used due to the limited formation of indicators and the scope of their application, the complexity of this system in terms of its content and use, as well as due to the failure to consider the specific features of assessing the effectiveness of the agri-food sector. It is only possible to apply one of the main ideas of the Balanced Scorecard – strategic orientation in the development of a system of performance indicators.
Qualitative methods / Savytska G. [135]	Considering three aspects of the activities of agri-food sectors: production, financial and investment, in order to obtain a more accurate assessment of the effectiveness of activities.
Quantitative Methods / Savytska G. [135]	They can most accurately reflect the efficiency of the agri-food sector, which is characterized by quite a variety of activities (financial and economic method).
Mathematical Methods / Savytska G. [135]	They can quite accurately assess the performance indicators of the agri-food sector, but due to the complexity of the calculations, there is no practice of application in these sectors of the economy.

Continuation of table 1.3

Method/Author	Features of the valuation method
Methods of performance evaluation, including discounting / Vlasova V.M. [16]	When assessing the efficiency of industries using these methods, it becomes possible to consider the level of inflation in a market economy.
Formalized methods / Savytska G. [135]	They allow to assess the efficiency of industries with greater accuracy, in particular, elementary methods of microeconomic analysis, traditional methods of economic statistics and methods of financial calculations.
Non-formalized methods / Savytska G. [135]	They include versatile methods, but the most acceptable for use are the following: development of a system of indicators (in particular, the calculation of economic and market value added (EVA and MVA); cash flow on invested capital (CFROI); the method of comparison with the industry average; methods of analysis of financial statements; methods of detailing (in particular, factor analysis, which

	allows you to assess the impact on the performance indicator of an increase (decrease) of a particular type of resource).
Domestic school	
Parametric methods (econometric approach) / Katkova N.V. [69]	They include several methods, from which it is possible to use the method of evaluating efficiency using marginal analysis, which allows you to determine the maximum profit with the most rational option for replacing resources.
Nonparametric methods (econometric approach) / Katkova N.V. [69]	The most acceptable is the analysis of the operating environment or data envelope (DEA), which allows you to identify efficiently and inefficiently functioning enterprises of one district (region). However, it has several limitations: it is important that resources are more or less homogeneous in quality, instead of individual types of resources, it is necessary to use total material costs; When calculating the efficiency of the allocated resources, it is necessary to know the prices for the resources used by the enterprises of the district.
Resource methods / Voronin A.A., Salyga K.S. [18; 136]	Reflect the result of activities per unit of available resources (applied resources), for example, return on fixed capital, working capital, etc.
Cost methods / Voronin A.A., Salyga K.S. [18; 136]	They are aimed at characterizing the effect of industries derived from each unit of total costs (resources consumed), for example, the level of profitability.
Use of groups of socio-economic indicators / Gontareva I.V., Yefremov A.V. [25; 47]	It allows you to conduct a comprehensive assessment of the efficiency of the functioning of enterprises.

**Designed by the author*

It should be noted that the choice of a method for assessing the competitiveness of an industry depends on many factors: the purpose of the assessment, the available information, the statement of the problem, the preferences of the decision-maker, the amount of time allotted for decision-making, the professional training of the decision-maker. In practice, especially in the context of the availability of various types of information, it will be helpful to apply various methodological approaches to assess the competitiveness of both enterprises and the industry as a whole, analyze their results, and choose the most acceptable option, weighing all the indicators [41].

The effectiveness of assessing the functioning of agri-food sectors also depends on the level of management at which it is carried out. First of all, to form an appropriate system of indicators, it is necessary to determine what specific level

of management is critical for the sectors of the agri-food sector. Most researchers distinguish three levels of management: higher, middle, and lower. At each level of management, it is necessary to select such a set of indicators, the components of which are minimally dependent on each other and, at the same time, reflect the achievement of the goal as much as possible.

Depending on the level of regulation of the agrarian sector of the economy, the following can be distinguished: national – which determines the effectiveness of state regulation for the whole society and agriculture as a whole; regional – the effectiveness of state regulation for individual regions; sectoral – related to the improvement of the socio-economic condition of agriculture as a whole and its sub-sectors; corporate – the effectiveness of state regulation for individual commodity producers, their associations, groups and populations with diverse interests [2].

We agree with the opinion of P. Nesenenko that the methodology for assessing the effectiveness of state regulation of the agricultural sector should include an analysis of the following criteria (Fig. 1.4).

In contrast to the definition of economic efficiency, the assessment of the effectiveness of state regulation has its own peculiarities since this activity is carried out with the help of state power and public administration bodies. Based on this, the criteria for the effectiveness of state regulation of the agri-food market should be recognized: the level of provision of socio-economic needs of the population depending on the established priorities, which may change at each subsequent stage of economic development; the ratio of production resources costs and the results obtained; rationality of distribution and efficiency of use of resources of the national economy.

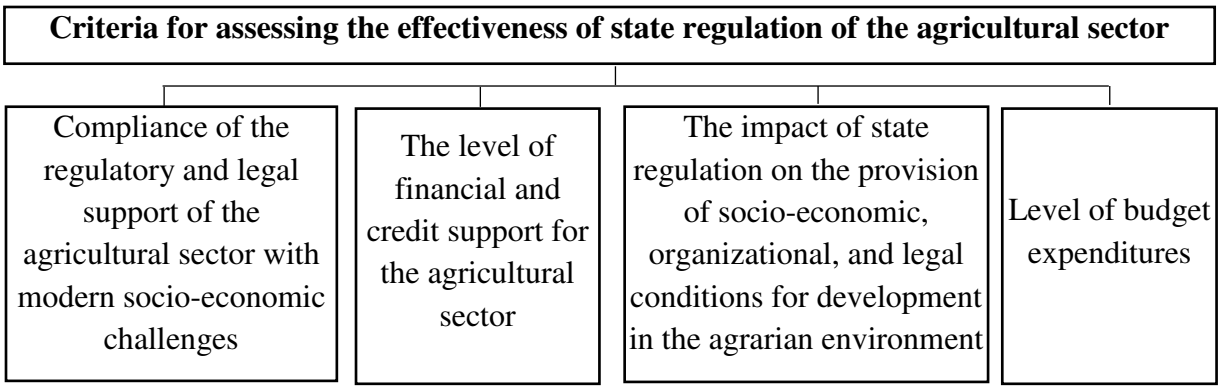


Fig. 1.4. Criteria for assessing the effectiveness of state regulation of the agrarian sector [108]

The effectiveness of state regulation of agricultural production can be determined by considering the state, on the one hand, as an exponent of national interests and a regulator of socio-economic processes and, on the other hand, as a prominent owner and business entity.

The efficiency criteria of the state as an economic entity are based on indicators of the economic efficiency of an enterprise or achievement of a social effect. Instead, the criteria for the effectiveness of regulation of the state as an exponent of national interests should be considered from two positions: depending on the hierarchical levels of management (national, regional, sectoral) – the degree of achievement of the goals of the state agrarian policy; Depending on the types of efficiency (economic, social, environmental, institutional), they determine their criteria that testify to the consequences of the state's influence on the agrarian economy, social sphere, environmental protection and the formation of the institutional environment. At the corporate level – profit and other indicators of the economic efficiency of the enterprise. [2].

Assessment, analysis, and diagnostics of the competitiveness of agri-food sectors is a set of tools and means, which includes, first, the development of a method by which the assessment will be carried out. In the list of existing general scientific methods of economic research, the following methods for assessing competitiveness at the industry level can be distinguished:

1. Differential intra-industry. It is used as a method for assessing competitiveness based on comparing single parameters of the analyzed and analog-related enterprises in the industry. The use of this approach allows us to establish:

- whether the parameters of the basic one have reached the level of parameters of the evaluated business entity;

- by what parameters it was not achieved;

- which of the parameters differs the most from the analog?

Such an assessment allows us to state the competitiveness of the analyzed enterprise, giving only a superficial idea of the actual state of affairs. It allows only the conclusion of the advantages and disadvantages of the evaluated enterprises according to individual indicators. To overcome these shortcomings and obtain deeper information, you need to use an integrated method.

2. Complex is a method of assessing the competitiveness of industries based on the use of group, integral, and mixed indicators. Assessment of competitiveness is carried out by comparing the indicators of the analyzed economic entities with similar indicators of the standard. The advantage of this method is the simplicity of calculations and the possibility of unambiguous interpretation of the results, and the main disadvantage is the incomplete characterization of the areas of activity.

In addition to general scientific methods, some methods combine elements of both differential and marketing general scientific approaches. Conventionally, these methods can be divided into analytical, analytical-prognostic, and graphic.

Analytical methods for assessing competitiveness at the sectoral level include assessing competitiveness through an integral indicator, assessing competitiveness based on the calculation of market share, assessing competitiveness based on the theory of effective competition, etc. The advantages of this group of methods are the simplicity of calculations with the available information, as well as a relatively easy comparison of the parameters of the analyzed enterprises and the analog sample. The disadvantage of this group of methods is the subjective influence on the assessment of competitiveness on the

part of experts, as well as the difficulties associated with the limited availability of the necessary data on the activities of the evaluated economic entities.

Analytical and prognostic methods are distinguished not only by the possibility of taking into account the influence of various environmental factors when assessing the competitiveness of agri-food sectors but also by the possibility of a comprehensive analysis of goods, market conditions, and technology. This group of methods includes the method of brainstorming, the method of assessing the competitiveness of products based on the level and dynamics of sales, etc.

Graphical methods for assessing competitiveness (competitiveness polygon, pie chart method, histogram method, etc.) allow you to demonstrate the competitive position of the industry in the market of energy, resources, raw materials, and investments in comparison with competitors. However, the need for accurate quantitative characteristics of enterprises in the industry according to the specified criteria limits the possibility of applying these methods.

The carried-out classification of methods simplifies assessing competitiveness at the sectoral level, allowing you to choose between analytical, analytical-prognostic, and graphical methods, considering the completeness of the information available for analysis.

In the process of research, it is also essential to assess and analyze the price competitiveness of certain types of products, using the existing methodological approaches to determining the price of offers for products of the highest quality (including organic agricultural products) and products sold in favorable terms for the consumer.

The formula determines price competitiveness:

$$CC = (C - PS):C \quad (1.5)$$

where C is the selling price of 1 c of products; PS is the total cost of 1 cent of products (production cost plus costs for the sale of products).

Commodity producers who are economically able to sell their agri-food products at competitors' prices and at the same time make a profit have higher

price competitiveness. The minimum price is an individual price formed at each enterprise and determined by the production costs of a unit of goods incurred by a particular commodity producer, at which it receives zero profit. [46, p. 39].

As we can see from the analysis of existing methods for assessing the competitiveness of agri-food sectors, many of them are based on the recognition that competitiveness is directly reflected in the level of their investment attractiveness, payback, investment, budget support for the competitiveness of products (the method of assessment based on the level of sales). It should be noted, however, that the competitiveness of products is a necessary but not sufficient condition for the competitiveness of individual enterprises and the industry for the following reasons:

- firstly, the competitiveness of products is determined in a short period from an economic point of view, while the assessment of the competitiveness of the enterprise and the industry is carried out over a long period;
- secondly, the level of competitiveness of products is determined for each of its types, and the assessment of the competitiveness of the industry covers not only the entire nomenclature produced by processing enterprises but also such areas of their activity as marketing, finance, management, etc.;
- thirdly, the leadership of the state, relevant ministries and departments, and enterprise management are interested in assessing the competitiveness of agri-food sectors and determining the feasibility of a particular activity. The consumer, in turn, when assessing the competitiveness of products or services, is interested in something other than production costs.

We agree with the opinion of N.M. Koskovetska and N.E. Skorobogatova that it is more appropriate to use the formula of identified competitive advantage (RCA), which the Research Center for Forecasting and International Information of France justifies:

$$RCA = \frac{1000}{E_j^{ref} + I_{ij}^{ref}} \times \left[\left(E_{ij}^{ref} - I_{ij}^{ref} \right) - \left(E_j^{ref} - I_j^{ref} \right) \times \frac{(E_{ij}^{ref} - I_{ij}^{ref})}{(E_j^{ref} - I_j^{ref})} \right] \quad (1.6)$$

where E_j^{ref} – is the total export of country j to other countries taken for

analysis (ref);

I_j^{ref} – total imports of country j to other countries taken for analysis (ref);

E_{ij}^{ref} – export of goods of industry i country j to other countries taken for analysis (ref);

I_{ij}^{ref} – is the import of goods from industry i country j from other countries taken for analysis (ref).

The proposed methodical approach allows the assessment of the identified comparative advantage of a country in comparison with a group of other countries involved in the analysis for a certain period (a year or several years). Also, based on the above approach, comparative advantage can be considered in dynamics in the case of analysis in the long term or find its weighted average for a certain period [81].

In addition, the widespread use of expert methods for measuring the competitiveness of agri-food sectors and enterprises, the use of which, as it is known, to a certain extent reduces the reliability and objectivity of the assessment results, has been established. A common drawback of the analyzed methods for assessing competitiveness at the sectoral level is the limited nature of their application, which gives grounds for improving these aspects of this process and searching for new methodological approaches that allow them to be implemented in practice.

One of these approaches is the DEA (Data et al.) method. The essence of the DEA method in modern interpretation is to compare the actual efficiency indicator through the indicator of product yield with the maximum possible amount of resources. At the same time, the enterprises that provide the highest (maximum) production level per unit of resources are taken as a standard, and all other enterprises are compared with them. With the help of the developed mathematical apparatus, the so-called data shell is built, which sets the "limit of production

capabilities", the maximum possible yield under given conditions for any combination of resources [135].

Efficiency (competitiveness) is understood as the ratio of utility functions built on the values of the input parameters and the values of the output parameters of the objects under study. Thus, according to this methodical approach, the most competitive enterprise will be the one that either with the same volume of input resources (material, labor, financial, etc.) increases the output parameters (amount of profit) or with the same volume of output, parameters reduces the resources at the input (uses production and economic resources as efficiently as possible). For the industry, this will be the level of profitability, the volume of value added. The result of the DEA's solution to the problem of assessing the competitiveness of agri-food sectors is as follows:

- study of the object of study as a complexly organized system, which is characterized by input (consumption) parameters and output parameters;

- the ability to consider simultaneously a set of input and output parameters and a set of homogeneous objects;

- the quantitative value of the coefficient of competitiveness;

- for non-competitive objects – the values of the parameters that must be achieved in order to become competitive;

- for each non-competitive object, a list of reference objects that operate in similar conditions but are competitive;

- For competitive objects, the value of the "margin of safety" is how much it is possible to worsen the current values of the evaluation parameters in order for the object to remain competitive.

Thus, this methodical approach allows not only to assess the level of competitiveness of agri-food sectors comprehensively but also to obtain a quantitative value of their competitiveness on a national and international scale.

Thus, in the modern theory of management, there are four levels or stages of determining the competitiveness of agri-food sectors. Each of them has its approaches to the organization of management. At the first level of

competitiveness management at the industry level, managers of its enterprises consider the management factor as "internally neutral". They believe that since regular management was once established in their companies, more management does not affect competitiveness. These managers see their role only in providing production or services without caring about consumers and their place in the market.

Management, for the second level of competitiveness management, seeks to make its production and management systems "externally neutral". Such entities must fully comply with the standards set by their main competitors in a particular market. They try to reproduce what leading firms do: they strive to borrow techniques, technologies, and methods of organizing production from leading enterprises, to buy raw materials and materials, semi-finished products and components from the same sources as their competitors, within the industry or at the inter-industry level.

Distinctive features of the third level of competitiveness management are manifested in the following – in the industry and its enterprises, the focus is on the needs and demands of consumers, the concept of consumer-oriented marketing is implemented, and management begins to contribute to the rational development of operational processes, restructuring of the industry in order to increase capitalization, financial and economic stability.

The theoretical basis of the process of managing the competitiveness of agri-food sectors in modern conditions following the resource approach is the need to analyze their tangible and intangible assets. One of the most important intangible assets of modern business entities is their business reputation.

Increasing the competitiveness of industry enterprises based on business reputation management is carried out by their personnel and management. There are several generally accepted principles as components of personnel management to motivate in increasing competitiveness. An important place among them is occupied by the democratization of management, on which the willingness to

cooperate depends: knowledge of individuals and their needs, fairness, respect for social equality, and consistency.

A single set of unique principles is needed to assess its significance and applicability for increasing competitiveness at the sectoral level, which, unlike the general principles of management and organization of production, have yet to be fully developed. The principles of increasing competitiveness based on business reputation management should be scientifically grounded vital starting points, which serve as the basis for effective strategic management. In order to determine the principles of increasing competitiveness at the sectoral level based on business reputation management, it is advisable to refer to the general principles of management.

We believe that the main principles of developing the competitiveness of agri-food sectors include:

- the principle of solvency, which means that solvency must be ensured at all times;

- the principle of supporting the initiative, which determines the course of events and is a reaction to external circumstances;

- the principle of profitability for business entities;

- the principle of concentration, which guarantees that all efforts will be directed to obtaining the desired result and concentrated at the right time in the right place;

- the principle of flexibility, which states that the strategy has a sufficient internal margin of safety to ensure freedom of maneuver. A flexible and concentrated strategy allows the use of the same resources in the strategy to gain the desired positions promptly;

- the principle of coordination and responsibility of management. Managers must be selected and motivated in such a way that their interests and values correspond to their role. To successfully implement the strategy, you need not only to make commitments but also to fulfill them;

- the principle of changing strategic positions;

- the principle of risk balance, which provides for the financing of the most risky investments at the expense of business entities' funds.

Increasing the competitiveness of agri-food sectors is also related to the general principles of strategic management:

1) separation of property management (functions of the owner) and production (director, manager);

2) planning of income and expenses;

3) separation of functions of strategic and operational management of production;

4) division of profit-making tasks into prospective and current;

5) a variety of management strategies.

It should be noted that in foreign practice, the most common method for assessing the efficiency of the agri-food sectors of the economy, based on the use of a system of economic indicators, is the development of a balanced scorecard.

Thus, the assessment of the efficiency of the functioning of the agri-food sector does not differ significantly from the assessment of other sectors of the national economy according to its basic principles. However, it has certain features in the methodology of accounting, which are due to the specifics of the functioning of the agri-food sector of the economy:

1) in the field of production management: complexity and dynamism of production processes; high level of depreciation of fixed assets; high energy intensity of products produced by enterprises in the agri-food sector; insufficient staffing of production with effective high-performance modern equipment, tools, modern devices, control and diagnostics system; rapid obsolescence of some types of engineering products, their low quality; low and uncontrolled level of mechanization and automation of production; lack of a unified effective system of organization of the technological process and management at enterprises;

2) in the field of financial management of enterprises in the agri-food sector: deterioration of financial results of Ukrainian enterprises, decrease in the solvency

of enterprises, lack of opportunities to modernize equipment (lack of own sources of funding); insufficient number of large investment-attractive enterprises;

3) in the sphere of influence of the financial services market: a shortage of external sources of financing for agri-food sectors; deterioration of lending conditions, high cost of borrowed financial resources (borrowed capital); increased currency risks and uncertainties due to devaluation expectations; insufficient number of investors; underdevelopment of the securities market in Ukraine, their low liquidity;

4) in the sphere of influence of market factors: an export-oriented model of development of agri-food sectors (dependence on foreign market conditions; underdevelopment of the domestic market); narrow specialization of Ukraine's foreign trade, caused by the low level of diversification of the commodity and geographical structure of exports; instability of demand for products in the foreign and domestic markets; unfavorable terms of trade for Ukrainian enterprises, intensification of competition in foreign markets;

5) in the sphere of influence of institutional factors: incompleteness of economic reforms in Ukraine; instability of the economic and political situation in Ukraine, its relations with consumer countries; imperfection of tax policy and ensuring economic development; inefficiency of state management of the competitiveness of agri-food sectors; freezing programs for the modernization of industries.

Conclusion to Chapter I

1. The multivariate development of economic structures, including the sectoral level, creates a demand for the development of forms and methods of strategic management that meet the challenges of the modern external environment and integrate into the system the factors of achieving competitiveness based on ensuring interaction and synergy of components on the way to solving the problems of implementing the mission of functioning of the branches of the agri-food sector in the process of combining goals, resources and results, coordinating

structural, organizational components, as well as territorial location. The peculiarity of the agri-food sector is the significant role of regional localization in intersectoral relations, which is implemented in the form of local formations of various scales.

2. The structure of the process of strategic management based on the works of domestic and foreign scientists is analyzed, the result is the author's vision of the algorithm of strategic management of competitiveness, which includes the sequential passage of interdependent stages (analysis of the external environment, mission statement, analysis of the internal environment, formulation of goals for competitiveness management, strategic choice, setting tasks, development of plans, implementation of changes, control) with sustainable feedback and feedback influence of each process on the other and their totality through the implementation of the corrective function.

3. The objective basis of strategic management is the analysis of the external environment. Currently, there is a generation and rooting of new forms of existence of economic entities in a system characterized by instability, uncertainty, complexity, and ambiguity. Threats and challenges of the external environment determine the priority of the methodology for implementing strategic management on weak signals based on the organization of receipt and effective processing of information flows intended to support decision-making. A high level of instability determines strategic management methods based on anticipating changes (strategic planning, choice of strategic positions) and management based on flexible emergency solutions.

4. Defining the mission of the agri-food sector within the framework of strategic management acts as a vector of movement and a measure of the success of the process. The processes of globalization change the trajectory of formatting the socio-economic space in the plane of a systematic combination of ecological and humanistic ethics. This necessitates the implementation of sustainable development components in the mission of sectoral transformation and the introduction of ESG principles into the activities of agricultural and industrial enterprises in the agri-food sector with an emphasis on environmental

responsibility, social justice, and equality, innovation, considering the interests of stakeholders, and sustainability.

5. The limitations of strategic management of competitiveness of agri-food sectors are systematized, including lack of a systematic approach to the formation of strategic management of competitiveness, competition, inconsistency of strategic and current activities, lack or insufficient level of strategic information, lack of sufficient skills of strategic management among personnel, resistance to change. Their assessment from the point of view of a subjective-objective criterion allows us to conclude that the role of human capital in the system of strategic management of competitiveness has increased. At the same time, the general principles of human development form a strategy for transformational change in the long term.

6. The competitiveness of agri-food sectors is determined by qualitative and quantitative factors, which can be quite fully characterized using a system of appropriate quantitative, natural, cost, and relative indicators. The most significant factors in the formation of competitiveness of enterprises in the agro-industrial sphere include micro-level and macro-level factors that characterize the state of the components of the competitive environment and make it possible to respond to changes in market conditions, elasticity of demand, dynamics of supply and its volumes.

It is necessary to allocate a group of strategic enterprises in the sphere to analyze and increase the competitiveness of the agri-food sector to increase the competitive potential of the industry, segment the market's existing and potential consumers, and form their needs;

1. To calculate the competitiveness of goods of these enterprises as a factor in assessing the competitiveness of the enterprise; to analyze the competitiveness of enterprises and identify the main factors influencing the competitive environment, which will be the primary determinant of assessing the competitiveness of the industry. All this will make it possible to develop a strategy for improving the identified influencing factors.

2. The components of strategic management of competitiveness of agri-food sectors and their business entities in a broad sense are strategic planning;

management based on the choice of strategic positions of competitiveness; management of strategic tasks; management through the implementation of emergency measures, priority programs for the development of industries and their enterprises, etc. It provides answers to the following essential questions: what the position of the industry is, type of activity in the current period; in what position they would like to be in the future (in three, five, ten years), and in what way it is advisable to achieve the desired result.

3. Assessment of the competitiveness of a particular area of activity, although important, reflects only certain facets of the activities of agri-food sectors. The interconnectedness of industries in the structure of the agri-food sector complicates the process of managerial decision-making: improving performance in one segment can lead to deterioration in another. Thus, one-dimensional coefficients for assessing competitiveness, used in most methods, can only sometimes adequately reflect the behavior of a complex object in a multidimensional set of parameters. It is advisable to use a system of indicators to assess the efficiency of the agri-food sector since it is the system of indicators that will allow a comprehensive assessment of the results of a particular management decision. The most acceptable methods for assessing the efficiency of functioning are methods based on cost and resource, qualitative and quantitative approaches. It is necessary to use qualitative and quantitative approaches, that is, to evaluate the efficiency of the financial and economic method (quantitative approach) of all areas of activity of the industry (qualitative approach).

CHAPTER II.
ASSESSMENT OF THE COMPETITIVENESS OF AGRI-FOOD SECTORS

2.1. The influence of environmental factors on the formation of competitiveness

In the context of globalization and the integration of all types of activities, the problems of ensuring the competitiveness of production of national economies come to the fore of socio-economic development since only competitiveness guarantees survival in the domestic and foreign markets. Otherwise, the agri-food sector will not be able to function normally. The current stage of development of Ukraine's economy, associated with membership in the WTO and activation in world markets, puts forward qualitatively new requirements for managing the competitiveness of the main activities.

The peculiarities of economic activity in Ukraine, which are characterized by the dynamism of changes in the external market environment, problems in the receipt of investments, intensification of competition, increase in the level of commercial risk, the difficult financial situation of a significant number of business entities, encourage the agri-food sector to search for means of their survival and ensure effective functioning. In this regard, there is a need to improve the management of competitiveness of agri-food sectors using modern principles of management marketing and ensuring a strategic approach to them.

In modern competition, with all its sharpness and dynamism, the winner is the one who analyzes and competes for his competitive position. Agri-food sectors must set themselves the task of increasing the level of competitiveness of their products to survive this struggle and the industry. According to R. Bondarchuk, the main components of the concept of competitiveness of products and enterprises are quality, consumption price, demand, advertising, and service [11, p.15-20]. Korostylov V.A. believes that the competitiveness of products characterizes the

degree of possible sale of manufactured products on the market, and the competitiveness of agri-food sectors shows the degree of ability to manufacture and sell their products, make deductions to the budget, and ensure sustainable functioning.

Thus, these concepts are interrelated and complement each other. Indicators of product competitiveness are quantitative characteristics that reveal the maturity of factors for quality assurance, and indicators of competitiveness of agri-food sectors characterize the qualitative aspect of competition. Panasenko D.A. interprets that the factors that affect the competitiveness of the main activities can be accidental, which increase or decrease the level of competition [119, p.19-24].

In the work of M. Porter, it is determined that the competitiveness of products is well revealed through the nature of the product itself. On the one hand, the product is a commodity. On the other hand, the cost of the product. Production as a commodity measures the satisfaction of needs, and production as value includes price, demand, and costs. Product competitiveness is the ability of products to be more attractive to the buyer than other products of a similar type and purpose due to the better correspondence of their quality and cost characteristics to the requirements of this market and consumer assessments.

The external environment of agri-food sectors contains sources that provide enterprises with the resources necessary to maintain their internal potential at the appropriate level. Agri-food sectors are in a state of constant exchange with the external environment, thereby providing themselves with the opportunity to function. The task of strategic competitiveness management is to ensure that the main activities interact with the external environment in such a way that they maintain their potential at the level necessary to achieve their goals and thus allow them to develop in the long term. We are talking about state support, budgetary functioning, protectionism, etc.

To determine the strategy for the functioning of the agri-food sectors and to implement this strategy, it is necessary to have an in-depth understanding of the external environment, trends in its development, and the place of the main

activities in it. At the same time, both the internal environment and the external environment are studied by strategic management primarily in order to reveal the threats and opportunities that the industry must take into account when determining its goals and achieving them.

Factors of competitiveness are those phenomena and processes of production and economic activity of enterprises and the socio-economic life of society that cause changes in the absolute and relative value of production costs and, as a result, changes in the level of competitiveness of enterprises. Factors can change the competitiveness of enterprises and industries upwards or downwards. External factors are socio-economic and organizational relations that allow enterprises to create products that are more attractive in terms of price and non-price characteristics.

The external environment of agri-food sectors refers to all conditions and factors that arise in the environment, regardless of the activities of a particular industry, but which have or may affect its functioning. Environmental analysis is a process by which factors external to agri-food industries can be monitored to identify opportunities and threats to them. The analysis provides time to anticipate opportunities, time to make a contingency plan, time to develop an early warning system for possible threats, and time to develop strategies that can turn past threats into beneficial opportunities (Figure 2.1).

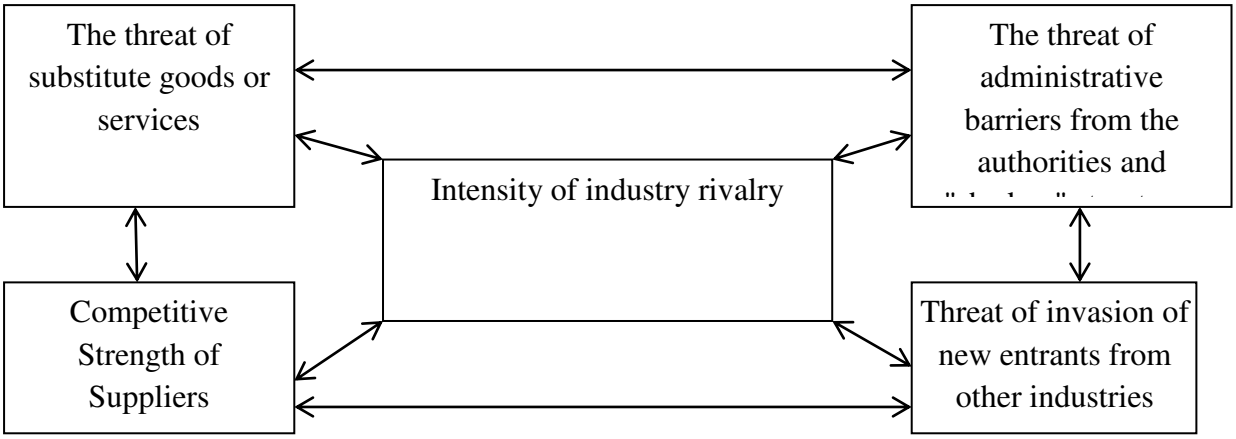


Fig. 2.1. Model of interaction of forces that determine competition in the foreign market of agri-food sectors *(developed by the author)*

Competition from potential competitors from other industries, including foreign companies, arises when there is a possibility that their enterprises may enter this industry. The threat on their part is determined by the "height" of the entry barrier, which depends on the following factors:

- parameters of production and marketing effects of scale and development;
- availability of patents/licenses for the product;
- existing preferences and loyalty of consumers to the brand of the product;
- availability or cost of creating and ensuring the functioning of sales and supply channels;
- the impact of state regulation, the presence of various barriers on the part of public organizations, and shadow structures.

The "height" of the entry barrier can be expressed in monetary terms. The decision to enter the industry is determined based on a comparison of the value of the entry barrier and the estimated profits in the long term. Some components that determine the "height" of the entry barrier may change over time. For example, the expiration of essential patents tends to reduce the value of the entry barrier. Conversely, investments in advertising, the creation of sales networks, and other marketing activities carried out by industry organizations increase it. In this regard, we have classified the environmental factors that affect the competitiveness of agri-food enterprises (Table 2.1).

Kharkiv region is characterized by a unique complex of natural, agrarian, and recreational conditions and resources. First, these are hydrogeological conditions and orographic features of the territory (flatness, monotony of landscapes, absence of sharp natural barriers), which allow economic activity to be carried out without restrictions. The investment attractiveness of agri-food sectors is formed by the territory and the available population.

In terms of population, the Kharkiv region ranks 2nd in Ukraine, and in terms of population density per 1 km2 – one of the last. At the beginning of 2022, 2580.6 thousand people lived in the region, and for each square kilometer of territory – 82.7 thousand people. A negative factor in all types of activities is the

low population density. In rural areas, it ranges from 17-40 people per km. The population is also unevenly distributed. 30% of its total number is concentrated in Kharkiv.

Table 2.1

Macro-Environment Factors Influencing the Competitiveness of the Main Activities of Agri-Food Enterprises *

Group of factors	Content
Spatial and economic factors	Regional position; the size of the territory; the nature of the surface; conditions of natural resources; the value of the gross national product; inflation rates; Unemployment; other factors.
Socio-demographic factors and social behavior	Demographic structure of the population; standard of living (real incomes, level of consumer demand); population density and distribution; seasonal migrations; national traditions and customs that affect consumer preferences; environmental factors; poverty and wealth threshold; other factors.
Macroeconomic factors	GDP dynamics; inflation rate; the amount of money supply in circulation; interest rate, national currency exchange rate; the level of investment activity and the state of the state budget; price restrictions in the market of raw materials and energy resources; employment rate and effective demand; other factors.
Innovation and investment factors	State priorities in the development of industries and spheres of the national economy; innovation priorities (by sectors of the economy); investment attractiveness of the industry (region); protection of intellectual property; other factors.
Organizational and managerial factors	Institutional arrangements; sectoral organization; regional structure of management; management efficiency; regional programs; management and marketing strategies.

**Designed by the author.*

In this regard, we have analyzed the natural recreational resources of the Kharkiv region and carried out zoning according to their ranks, which will make it possible to trace not only the features of the location and structure of natural recreational resources but also the close connection of the conditions of their operation with the environmental, socio-economic, innovation and investment factors of competitive development of the economy at the sectoral level. This zoning is consistent with the ranking of districts of the Kharkiv region in terms of size, variety of component structure, and other indicators.

Kharkiv region has large areas of agricultural land with fertile land. The branches of budgeting and specialization are mainly the production of grain and industrial crops. In general, the level of soil fertility of the region is sufficient for high-quality agricultural production. A high level of plowing of lands, including on slopes, a significant expansion of row crops, and almost complete cessation of the implementation of a set of works on soil protection, violation of the tillage system led to a deterioration in the condition of lands. The main problem of the deterioration of land resources in the Kharkiv region is soil degradation in the Kharkiv region. There are 152.2 thousand hectares of acidic soils. They are distributed mainly in the north and west-northern parts of the region. Among agricultural lands, acidic soils occupy about 82 thousand hectares. However, in recent years, liming has not been carried out in the region except in isolated cases. The lack of liming of acidic soils leads to a decrease in their productivity due to the deterioration of agrochemical and environmental properties [52]. As a result of water erosion, gullies, and ravines are also formed on the slopes, which complicate the work of agricultural machines and implements and take large areas of agricultural land out of use. This should be considered when planning the sectoral structure of agricultural production and activities in general.

The study of the economic components of the macro environment allows us to understand how the financial resources of the Kharkiv region are formed and distributed. The study involves the analysis of such characteristics as the value of the gross national and regional product, inflation rates, unemployment rates, etc.

These factors can represent either a threat or a new opportunity for agri-food industries. The leading socio-economic indicators of management are presented in Table. 2.2.

At the end of 2021, the total volume of gross regional production amounted to 319796 million tons. UAH. Increased by 24% compared to the production of the previous year (Table 2.2), including the volume of industrial products sold amounted to 204906 million tons. UAH, agricultural products – 44260 mln UAH, investments in fixed assets – 24647,6 mln UAH. Thus, according to the structure

of the products sold, the region has an industrial specialization.

Table 2.1

Structure of the Land Fund of Kharkiv Region

Main types of land and facilities	2018		2019		2020	
	total thousand hectares	% of the total area of the territory	total thousand hectares	% of the total area of the territory	total thousand hectares	% of the total area of the territory
Total area, including:	3141,8	100	3141,85	100	3141,85	100
1. Agricultural land, of which:	2411,03	78	2411,03	76,8	2411,03	76,8
Arable land	1932,36	61,4	1932,36	61,4	1932,36	61,4
Fallow lands	7,59	0,24	7,59	0,24	7,59	0,24
Perennial plantations	49,22	1,6	49,22	1,6	49,22	1,6
hayfields and pastures	421,86	13,4	421,86	13,4	421,86	13,4
2.Forests and other forest-covered areas	417,25	13,3	417,25	13,3	417,25	13,3
Forests are covered with them. Vegetation	377,93	12,0	377,93	12,0	377,93	12,0
3. Built-up land	124,84	4,0	124,84	4,0	124,84	4,0
4.Open wetlands	32,02	1,0	32,02	1,0	32,02	1,0
5. Open lands without vegetation cover (ravines, lands occupied by landslides, rubble)	33,77	1,1	33,77	1,1	33,77	1,1
6. Other lands	122,94	3,9	122,94	3,9	122,94	3,9
Total lands (land)	3081,11	98,1	3081,11	98,1	3081,11	98,1
Areas covered by surface waters	60,74	1,9	60,74	1,9	60,74	1,9

Source: According to the Main Department of the StateGeoCadastre in Kharkiv Oblast, according to the Report on the State of the Environment of Kharkiv Oblast in 2020 [23; 43]

The volume of services sold amounted to 204906 mln Exports of goods and services amounted to 1801 mln USD, imports – 2339,8 mln USD. The service sector and its branches are less developed. This indicates, considering the constant

upward trend, the possible prospects for forming activities in this direction. Unstable trends characterize the dynamics of investments in fixed assets. Their growth was halted at the peak of the financial crisis, and the following years were characterized by slow but steady growth

Table 2.2

Value and dynamics of the main socio-economic indicators of management in the Kharkiv region, 2015-2021*

	2015	2016	2017	2018	2019	2020	2021
Gross Regional product, mln UAH.	124843	154871	187454	233321	247667	257805	319796
per one person, UAH.	45816	57150	69489	86904	92864	97428	122227
Population incomes, mln UAH.	113952	135641	175850	216333	245934	263887	313394
Financial result before tax, mln UAH.	2769,8	3750,1	6790	8649,3	12994,7	13325,5	33570,4
The amount of industrial products, Million. UAH.	93791,8	115498,2	138913	157946,7	159007,5	175687	204906
Agricultural products farms, mln UAH.	19452	21385,9	24360,6	25944	27893,2	37250	44260
Capital investments, mln UAH.	11246,6	16545,8	19361,7	23551,3	22874,6	20248,5	24647,6
Export of goods and services, Million. USD. United States	380,1	750	1191,7	1109,6	1415,1	1471,4	1801,8
Import of goods and services, Million. USD. United States	242,3	549	1618,2	1665,2	1744,8	1802,5	2339,8
Natural growth, reduction (–) of population, thousand persons.	–17,6	–18,2	–19,2	–22,9	–22,5	–27,5	–39,7
Number of employees (aged 15–70 years), thous.	1230,8	1236,6	1247,1	1258,9	1263,9	1208,9	1181,1
Number of unemployed (aged 15–70 years), thous.	29,32	23,59	22,83	21,95	21,59	30,29	17,61
Unemployment rate, %	9,6	9,8	10,0	9,3	8,6	9,6	10,3
Average monthly wage, UAH	3697	4448	6244	7657	9081	10847	11313

***** *Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]*

A negative trend characterizes the natural growth of the population and labor force; from 2015 to 2021, it is consistently negative. The unemployment rate in 2021 was 10.3%. If we analyze the financial results of the agri-food sectors of the Kharkiv region, we can see that in 2021. The financial results of agriculture,

hunting and forestry, processing industry, and trade have changed most significantly.

Total output by type of economic activity in 2021 amounted to 44260 million tons. UAH, of which the share of agriculture, hunting, and forestry amounted to 10755 mln UAH., or 24.3%, the share of the processing industry is 11330 million tons. UAH. or 25.6%, the share of trade is 5222.7 mln UAH. or 11.8%. This testifies to the efficiency of management and competitiveness of the agri-food sectors of the Kharkiv region.

The structure of production by types of activity is presented in Table 2.3.

Table 2.3

Structure of production by types of activity in Kharkiv region, in actual prices, % of total *

Indicators	Issue						
	2015	2016	2017	2018	2019	2020	2021
In total	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Agriculture	26,9	22,7	21,7	18,7	22,5	22,3	24,3
Fisheries	0,2	0,2	0,2	0,1	0,1	0,1	0,1
Extractive industry	0,0	0,1	0,1	0,2	0,3	0,2	0,2
Processing Industry	39,8	32,5	27,0	28,2	26,0	26,8	25,6
Production of electricity, gas, water	3,2	3,0	3,3	3,0	2,7	3,2	3,4
Construction	3,2	3,5	4,6	5,5	5,5	2,7	3,1
Trade	8,3	10,1	11,5	11,1	11,4	11,5	11,8
Hospitality	0,5	0,8	1,2	1,2	1,2	1,0	1,2
Transport and Communications	5,9	8,4	8,9	9,1	9,0	9,4	8,2
Financial activities	0,7	1,8	1,8	2,1	2,3	2,8	2,1
Real Estate Transactions	2,0	3,9	4,7	5,3	4,5	4,2	4,0
Governance	2,5	3,7	4,3	4,5	4,4	4,5	4,6
Education	3,4	4,7	5,3	5,5	5,1	5,7	5,8
Health	2,6	3,2	3,6	3,6	3,2	3,7	3,8
Provision of utilities	0,8	1,4	1,8	1,9	1,8	1,9	1,8

** Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]*

As evidenced by the analysis of Table. 2.3, the most significant volumes of production are provided by the following industries: the processing industry accounts for 25.6% of the total, agriculture – 24.3%, and trade – 11.8%, they provide 61.7% of the total output. At the same time, the highest values of the

dynamics of production volumes are characteristic of the processing industry.

At the same time, there are unprofitable enterprises in the region. The presence of unprofitable industries by type of economic activity of the Kharkiv region suggests that the crisis phenomena that arose in economic entities in the early 90s. of the last century have yet to be fully overcome. However, there are some positive developments (Table 2.4).

Table 2.4

Unprofitable performance of enterprises by industries and types of economic activity of Kharkiv region in 2015-2021*

Indicators	2015		2017		2018		2019		2021	
	% to the number of enterprises	Amount of damages, mln UAH	% to the number of enterprises	Amount of damages, mln UAH	% to the number of enterprises	Amount of damages, mln UAH	% to the number of enterprises	Amount of damages, mln UAH	% to the number of enterprises	Amount of damages, mln UAH
In total	27,7	21549	30,0	10663	27,8	11198	28,0	10623	28,8	8631
Agriculture	12,5	1674	21,3	906,5	18,4	841,2	23,7	1105	13,3	598
Industry	25,4	5668	27,1	4562	26,6	5875	26,7	5474	28,3	4339
Construction	27,2	828	26,0	352	25,6	192,3	25,4	139,5	29,4	406,7
Trade	24,8	7260	26,2	1767	23,8	1779	24,5	1126	24,3	637,7
Transport & Communications	30,3	1532	30,7	322	26,8	437,3	26,8	435,1	25,0	429,8
Financial activities	31,0	173	35,2	401,4	35,3	254,7	34,0	326	31,0	120,5
Real Estate Transactions	40,8	2306	39,8	1401	37,4	1082	35,8	1032	43,2	990,7
Education	31,4	7,2	38,1	7,8	42,9	7,3	38,2	7,1	31,1	7,8
Provision of public services	29,7	6,1	36,2	4,4	33,8	5,8	33,3	7,2	34,7	7,2

Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]

Agricultural losses in 2021 amounted to 598 million. UAH, which amounted to 28.8% of the total number of enterprises in the industry, industrial losses – 4339 mln UAH. or 28.3%, trade losses – 637.7 mln UAH. or 24.3%.

Among the industries, the greatest unprofitability of enterprises is

characteristic of such an industry, and the minor importance is characteristic of education, financial activities, and the hotel industry. This indicates significant reserves for improving the efficiency and competitiveness of production in the presence of appropriate management, restructuring of unprofitable enterprises, and other support measures for unprofitable enterprises.

The social component of the external economic environment and the formation of competitiveness of agri-food sectors gives an idea of the demographic structure, standard of living, national traditions, and customs that affect consumer preferences and the population's lifestyle. Factors of social behavior include changing consumer expectations, attitudes, and customs. Some factors are considered dominant in society regarding entrepreneurship, the role of women and national minorities in life, changes in the social attitudes of managers, and the movement to protect the interests of consumers. It is often the social factor that creates the biggest problems for agri-food sectors (employment, layoffs, unemployment, environmental problems, modernization costs, etc.).

The main consequences of modern demographic processes include a decrease and partial loss of one's demographic potential for the quantitative reproduction of one's labor force in the future due to long-term depopulation and mass external migration. Thus, the long-term depopulation of the population due to a natural decrease with a significant predominance of mortality over the birth rate has led to catastrophic demographic losses in Ukraine. If in 2015, the fertility rate was 10.7, then in 2020, it was 7.8. At the same time, the mortality rate, on the contrary, increased from 14.9 to 15.9 (per 1000 people). This led to the depopulation of the population.

This situation indicates a narrowed reproduction of the population, causes a shortage of labor resources in the future, and encourages the implementation of a balanced demographic policy, especially in rural areas. The number of employed population by type of economic activity in 2015-2021 is presented in Table. 2.5.

Table 2.5

Number and dynamics of employed population by type of economic activity in Kharkiv region, 2015-2021*

(thousand people)

Indicators	2015	2016	2017	2018	2019	2021
In total	488,8	480,7	561,3	607,2	634,4	618,2
Agriculture	137,3	143,9	132,8	132,3	131,9	131,4
Industry	51,6	45,8	179,7	184,6	180,9	170
Construction	16,4	15,8	18,5	20,3	21,4	22,1
Trade, hotel industry	112,2	107,0	168,5	181,6	177,9	170,4
Transport & Communications	27,9	26,5	27,0	27,4	27,8	28,7
Financial & Insurance activity	4,7	4,5	2,0	1,9	1,8	1,5
Real Estate Transactions	18,0	18,1	20,2	23,6	21,7	19,4
Education	1,7	1,8	2,2	2,5	2,8	2,9
Health care and social assistance	9,3	9,6	7,5	20,2	49,2	51
Other activities	11,9	11,3	12	13,7	13,9	12,1

Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]

Analysis of the data in Table and Figure 2.5 shows that the number of employed people over the past six years has had a steady upward trend. In 2021, the number of employed population was 618.2 thousand people, which is more than 1/3 of the total population of the region. Of these, 131,400 people, or 21.2%, were employed in agriculture, 170,000 people, or 27.5%, in industry, and 170,400 people or 27.8%, in trade, hotels and restaurants.

This structure of employment indicates profound structural shifts in the agri-food sector. Branches of the service sector occupy a leading role in comparison with industry in ensuring employment of the population. The growth of employment in the Kharkiv region for this period is typical for education, health care, trade, catering, leisure industry, and financial activities.

The changing policy environment represents an area of constant market concern for agri-food sector business entities. The political component of the external environment should be studied, first, to have an idea of the intentions of public authorities regarding the development of society and business, as well as

how the state intends to implement its policy. The study of the political situation includes finding out what programs are proposed or implemented by different parties, what attitude in the Government exists about the development of various sectors of the economy and regions of the country, their possible restructuring, what areas of activity are given priority, etc.

The economic growth of the agri-food sector of the Kharkiv region, as well as of Ukraine as a whole, is carried out at the expense of innovation and investment support. This is required by the processes of international competition and the current stage of development of the economy as an economy of knowledge. Achievement of economic development of agri-food sectors at the expense of innovation and investment factors in modern conditions requires a coordinated solution to the problems of forming appropriate technological, institutional, and organizational structures capable of combining all the necessary elements into a standard reproductive circuit of the growth of the modern technological structure, creating prerequisites for modernization and improvement of efficiency of economic activity, new principles of its organization based on corporatization, clustering, capitalization of production.

Of great importance is the formation of innovation and investment centers, business incubators, venture companies, and specialized regional clusters. A unique role belongs to private initiatives and public-private partnerships in solving issues of innovative development. Proper investment remains the leading factor in implementing innovative developments and their implementation in business practice. The distribution of the volume of financing of innovation activity in the branches of industry of the Kharkiv region is illustrated by the data in Table. 2.6.

Table 2.6

Distribution of volumes and dynamics of financing of innovation activity in the branches of industry of Kharkiv region, in actual prices*

Indicators	2015		2017		2019		2021	
	thousand hryvnias	in % total Volume	thousand hryvnias	in % total Volume	thousand hryvnias	in % total Volume	thousand hryvnias	in % total Volume
In total incl.	667008,1	100,0	890885,5	100,0	672151,6	100,0	80122,9	100,0

at the expense of								
own funds	535444,6	80,3	662209,3	74,3	542458,9	80,7	78010,7	97,4
funds of domestic investors	61319,5	9,2	125536,4	14,1	65735,8	9,8	1313,7	1,6
Funds of foreign investors	10698,8	1,6	-	-	-	-	-	-
Other Sources	59545,2	8,9	103139,8	11,6	63956,9	9,5	798,5	1,0

** Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]*

The data in Table and Figure 2.6 shows that in 2021, the financing of innovation activities increased compared to 2015 and amounted to 80122.9 thousand UAH. The main share of financing is carried out at the expense of own funds. Its volumes significantly exceed the financing from domestic investors. Thus, in 2021, the financing of innovation activities in the industries of the Kharkiv region from own funds amounted to 78010.7 thousand UAH, which is 97.4% of the total investment, while financing from domestic investors amounted to

1313.7 thousand UAH, which is 1.6% of the total. This indicates insufficient state support for financing innovation activities in industries of the Kharkiv region. However, there is a particular growth, which is associated with the modernization of enterprises in the leading industries.

It is more expedient to start analyzing the inflow of investments in the main activities from 2009 to 2015 since it is this period that allows us to get the complete picture of the state of investment in the main activities of the Kharkiv region at the present stage of their development. It was inexpedient to conduct the study earlier than the above deadline for the following reasons:

Kharkiv region belongs mainly to the territories with a depressed economy. The recovery of its industrial complex and agriculture from the economic crisis that befell all sectors of the national economy of Ukraine after the collapse of the Soviet Union dragged on until the 2000s. This has led to a low level of investment

attractiveness of industrial enterprises against the background of traditionally unattractive agricultural sectors due to the riskiness of agriculture, uncertainty, slow return on capital, the need for significant amounts of working capital, and work-in-progress.

The challenging investment climate in the region in the mid-90s of the twentieth century was due to the redistribution of property and the lack of an effective organizational and economic mechanism for implementing the adopted legislative acts. The lack of information among potential investors and subdivisions of local authorities of the region, which would be engaged in the development of investment programs and projects, the creation of investment maps and constant monitoring of the investment potentials of the districts, the dissemination of the data obtained, both among domestic and foreign investors, were also negative factors.

That is why the investments received, for example, in the food industry and the industries for the processing of agricultural raw materials in the Kharkiv region in the period from 1992 to 2005 – had such insignificant volumes that they could not significantly change the situation in the region for 12 years, overcome the crisis and improve their competitiveness. Starting from the second half of 2004, the situation in the food and processing industries began to change for the better, and the positive dynamics of their development intensified. This is due to the commencement of activities of the International Finance Corporation in the Kharkiv region and the implementation of projects financed at its expense. In the total volume of investments received, investments were made at the expense of own funds – 53.6%; bank loans – 26.4%; funds of foreign investors – 19.8%; other revenues – 0.2%.

A significant factor in the activity of the leading branches of the region is the availability of financial resources. Their totality forms the financial and monetary resources of enterprises. In forming the latter, profit from activities, funds on accounts, accounts payable, authorized capital, and other types of capital are essential. As for public funds, industries are involved both in their formation and

use for the implementation of large-scale restructuring projects. Modernization of production, innovative product development, etc. The primary task of each financial resource is to determine its potential in terms of achieving long-term plans for the stable economic development of the agri-food sector and the country's economy.

The sectoral approach to using funds is that the total amount of funds allocated by the budget is sent to line ministries and departments, which, in turn, distribute this amount among enterprises and organizations. This approach is the main one in Ukraine, although it has a drawback – the dispersion of funds. It is necessary to finance targeted investment projects to prevent this, which in turn allows concentrating resources on the implementation of the main tasks of socio-economic development on a national scale.

Based on this, the center of gravity of the industries should move to the regional level. It is necessary to leave a larger share of budget funds on the ground, especially where it is necessary to intensify the development of essential activities to do this. Social expenditures of local budgets, current and capital, should be transferred to a solid regulatory basis, per capita, and all of the central part of budget revenues, more than the minimum normative amounts, should be directed to finance large-scale projects of structural restructuring of the economy.

It should be noted that such an approach will lead to the strengthening of intersectoral integration ties, contribute to the formation of new types of activities, and reduce the loss of raw materials in the process of transportation and processing. Of great importance will be the substantiation of production, economic, and social clusters as rational functional-sectoral territorial associations corporate structures in order to reduce the cost of production and provision of services, as well as to increase competitiveness at the sectoral level.

Financing according to the program-target or targeted approach will also contribute to solving social problems of protecting the population, increasing its employment and living standards, and developing social infrastructure not only to ensure the consumption of relevant goods and services but also budgeting as the

main activities (tourism and recreation industry, health care, education). Many countries around the world demonstrate significant budget revenues from the latter.

2.2. Efficiency of functioning of agri-food sectors

In the structure of industries of the Kharkiv region, it is necessary to distinguish at least three groups of leading activities: agriculture, industry, and trade. As mentioned, agriculture occupies an essential place among the branches of the Kharkiv region (Table 2.7).

Table 2.7

Agriculture in the economy of Kharkiv region, 2015-2021, in %*

Indicators	2015	2016	2017	2018	2019	2020	2021
Gross value added of agriculture, in total gross value added	26,1	24,1	22,3	20,1	15,8	22,5	21,2
Share of agricultural products in total output	26,0	23,0	22,7	21,7	18,7	22,5	22,3
Fixed assets of agriculture, in their total value	25,5	21,7	20,9	16,7	13,4	11,2	11,0
Number of agricultural workers, in their total number	29,9	17,1	15,8	14,5	13,9	14,0	14,3

* Calculated according to the data of the Main Department of Statistics in Kharkiv region

Data Table. Figure 2.7 shows that the gross value added of agriculture, in the total gross value added in 2021, decreased and amounted to 23.6%, against 26.1% in 2000, which is -2.5% less. This indicates the instability of the economic efficiency of the industry. However, the dynamics of its changes are positive. The share of the industry's products in the total volume of its output also has a positive tendency to increase over a long period.

This testifies to the competitiveness of the industry and its improvement. This is happening against the background of a reduction in the share of the value of fixed assets in the industry in their overall structure from 25.5 to 10.4% or by 10.1%. The number of people employed in agricultural production decreased by

more than half - from 29.9 to 12.7%. Considering the trends of increasing production, this indicates the processes of introducing innovations in the practice and organization of management, the modernization of the industry, and the use of innovative labor resources.

The main task of agricultural sectors in the conditions of market relations is to comprehensively meet the needs of the national economy, in general, and individual citizens, in particular, in its products, works, and services with high consumer properties and quality at minimal cost; increasing the contribution to the acceleration of the country's social development, the well-being of the population, the export potential and a positive image in international relations.

The main tasks of regulating and improving the efficiency of the agri-food sectors of the Kharkiv region should be creating a favorable investment environment by encouraging national investors to make investments, concentrating cash flows on priority areas of economic development, accumulation sufficient financial resources in the leading banks and their regional branches of the country; ensuring the availability of loans for borrowers by reducing their cost; ensuring the priority allocation of credit resources on preferential terms of refinancing to banks that lend to practical investment projects, etc.

One of the most critical factors in improving the efficiency and competitiveness of the functioning of agri-food sectors, which, in turn, directly affects the development of the entire economic complex of the Kharkiv region, is to provide them with fixed assets. Increasing the efficiency of the use and reproduction of fixed assets is one of the main problems for most domestic business entities at the present stage of economic development. Their financial condition and competitiveness of products in the domestic and world markets depend on the solution to this problem. At the same time, we are talking, first, about the pace of their renewal and modernization. They are characterized by the fixed assets renewal coefficient, which shows how much of the existing ones are new fixed assets at the end of the year (Table 2.8).

Table 2.8

Fixed assets renewal rate by main types of economic activity in Kharkiv region for 2015-2021*

Indicators	2015	2016	2017	2018	2019	2020	2021
In total	0,016	0,019	0,016	0,017	0,03	0,03	0,03
Agriculture	0,019	0,014	0,016	0,013	0,02	0,02	0,03
Fishing, fish farming	0,029	0,005	0,0001	0,052	0,016	0,06	0,02
Industry	0,018	0,031	0,015	0,01	0,02	0,04	0,02
Construction	0,033	0,016	0,025	0,11	0,08	0,06	0,09
Trade & Service	0,022	0,038	0,037	0,027	0,044	0,07	0,15
Hotels & Restaurants	0,042	0,006	0,012	0,005	0,033	0,02	0,01
Transport & Communications	0,036	0,038	0,024	0,018	0,066	0,04	0,04
Financial activities	0,11	0,061	0,129	0,32	0,19	0,32	0,1
Real Estate Transactions	0,01	0,006	0,003	0,014	0,013	0,004	0,02
Governance	0,0002	0,12	0,034	0,016	0,034	0,06	0,01
Education	0,0001	0,003	0,0073	0,04	0,035	0,02	0,02
Health care, social assistance	0,001	0,001	0,006	0,017	0,03	0,037	0,04
Utilities	0,003	0,001	0,009	0,02	0,018	0,02	0,02

Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]

It analyzes the fixed assets renewal rate from Table. 2.8, it should be noted that the share of new fixed assets for the specified period in the Kharkiv region increased from 0.016 in 2016 to 0.03 in 2021. The coefficient remains stable at 0.03. Considering the renewal coefficient for the main types of economic activity, such sectors of the economy as trade, repair of cars, household goods and personal items, financial activities, and construction are being modernized more dynamically.

As for the branches of industry and agriculture, in terms of the rate of increase in the cost of new fixed assets, they occupy the penultimate places in the Kharkiv region. Utilities, activities in the culture and sports, hotel and restaurant industry, social assistance, and other essential economic activities have worse indicators of renewal of fixed assets. In recent years, the situation in the healthcare sector has improved, and these indicators are growing.

Technological efficiency is the result of the interaction of factors of production, which characterizes the achieved productivity of living organisms used in agriculture as a means of production. In crop production, indicators of technological efficiency are the yield of crops per unit of sown area and the main quality parameters of crop products (sugar content in sugar beet, oil in sunflower seeds, protein in grain, etc.).

The yield of crops in the Kharkiv region over the past 18 years is shown in Table. 2.9. As we can see, the gross production of a specific type of product is taken as the result of the activity of enterprises, and this result is compared with the resource – the sown area of the crop. It is necessary to determine the biological yield of sugar, oil, protein, etc., to consider the quality of products per hectare of sown area, multiplying the yield of the crop per hectare by the percentage of the content of the corresponding organic matter (coefficient). It also provides some insight into the competitiveness of products and the industry.

The data is given in Table. Figure 2.9 indicates that the yield of crops, particularly cereals, in 2021 compared to 2020 decreased by 2.5%, sugar beet – increased by 15.2%, and soybeans – decreased by 3.2%. Mustard yields increased by 57%. The yield of potatoes and vegetables remained at the level of last year's indicators. This is due to the significant amplitude of agro-climatic conditions of the zone of risky agriculture, to which the Kharkiv region belongs.

Compared to the 90s, the technological efficiency of agricultural sectors – grain production, vegetable growing, and viticulture in terms of yield was not achieved. Instead, it is shown by industries to produce industrial crops, which indicates an increase in their competitiveness in the domestic and foreign agricultural markets. In animal husbandry, the technological indicators of efficiency and competitiveness are the productivity of livestock and poultry (Table 2.10), as well as the main parameters of the quality of livestock products. In animal husbandry, such technological indicators of production efficiency are milk yield per cow, offspring yield per 100 cows of the leading herd, average daily weight gain of young animals and fattening animals, and quality indicators are the content

of protein and fat in milk, the category of fatness of animals (high, average, below average, thin); in pig breeding – the average daily increase in live weight of pigs, the yield of offspring per sow, production of live weight of pigs per year per sow. The result of the activities of agricultural enterprises here is the produced livestock products, and the resource with which this result is compared is the number of animals.

Table 2.9

Status and dynamics of crop yields in Kharkiv region for 2015-2020*

Indicators	1990	2000	2010	2015	2019	2020	2021	2021 in % to 2020
Cereals and leguminous crops	37,9	18,0	18,7	39,6	42,2	47,7	46,5	97,5
Sugar beet (factory)	252,8	147,8	151,3	348,6	435,7	383,1	441,2	115,2
Sunflower	17,6	14,4	16,2	29,1	28,0	22,4	24,4	108,9
Soy	8,6	6,2	10,3	18,1	16,4	18,5	17,9	96,8
Winter rapeseed and colza	4,9	8,6	11,6	19,8	21,2	24,7	22,8	92,3
Mustard	12,8	4,6	3,8	5,7	7,4	7,7	12,1	157,1
Oil flax (curl)	-	-	10,3	13,2	10,0	14,6	12,0	82,2
Potato	92,8	122,2	63,4	166,4	141,7	124,4	120,1	96,5
Vegetable crops	125,7	117,5	160,5	225,5	212,7	181,0	179,9	99,4

Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]

As shown by the data in Table. 2.10, the average annual milk yield from one cow of farms of all categories in 2021 was 5783 kg. In 1990 – 2979 kg, the average annual shearing of wool from one sheep of farms of all categories in 2021 was 46 tons, and in 1990 – 982 tons, the average annual egg production of chickens of farms of all categories in 2021 was 481.1 million pieces, and in 1990 – 1106.7 mln pieces. For the period 2000-2021, the dynamics of the average annual milk yield. Increased markedly, and the average annual wool shear, on the contrary, decreased. Thus, dairy cattle breeding as an industry is competitive.

Table 2.10

Status and dynamics of livestock and poultry productivity in livestock industries of Kharkiv region, 1999-2021*

Indicators	1990	2000	2010	2015	2019	2020	2021
Average annual milk yield per cow, kg							
Farms of all categories	2979	2137	4560	5483	5792	5821	5783
Agricultural enterprises	2975	1689	4413	6302	7140	7698	7622
Average annual shearing of wool from one sheep, t							
Farms of all categories	982	85	66	63	53	52	46
Agricultural enterprises	963	52	20	15	6	set/s	set/s
Average annual egg production of laying hens, mln pieces							
Agricultural enterprises	1106,7	479,3	1100,6	699,6	707,4	636,4	481,1

The achieved level of technological efficiency of production has a significant impact on economic efficiency, primarily due to fixed costs, which, as you know, producers cannot influence in the short term. Indicators of technological efficiency reflect the specifics and features of agriculture associated with the functioning of the primary means of production in this area – land and living organisms as means of production. They make it possible to carry out a comparative assessment of production efficiency in dynamics and the territorial context for individual industries, enterprises, and regions.

To assess the competitiveness of the agri-food sectors of the Kharkiv region, it is necessary to widely use the efficiency indicators of the use of advanced capital, indicators of the cost of production and labor productivity, and return on capital of production assets.

The economic crisis, which began at the end of 2009, affected the functioning of the agricultural sectors of the Kharkiv region and significantly changed the financial indicators of their economic activity. However, a more significant impact on their competitiveness in insufficient implementation of innovations is exerted by the weather conditions of the zone of risky agriculture, their sharp fluctuations, and adverse weather phenomena and processes.

Also, the reduction of unprofitable and the increase in profitable agricultural enterprises occurs, in this regard, at the expense of producers of agricultural crop products. Thus, their share in the total number of enterprises is 93.7%. Public animal husbandry in the region has practically ceased its activities but is developing based on extensive agricultural holdings, whose modern agricultural technologies make it possible to establish competitive production. Production volumes and average selling prices of agricultural products of the Kharkiv region for 2021 are presented in Table. 2.11.

Table 2.11

Production volumes and average selling prices of agricultural enterprises of Kharkiv region for 2021*

Type of products	Implemented		Average selling prices	
	t	in %up to 2020.	UAH/t	in % by 2020
Cereals and legumes	2225952,7	83,3	6538,7	135
Sunflower	635711,9	62,7	17642,0	165
Beetroot sugar.	108336,4	112,2	1207,1	138,8
Vegetables	8467,3	88,7	24949,6	113,3
Fruit, berry	3649,9	121,9	6658	93,5
KRS	9967,2	95,5	36092,2	122,7
Pig	24917,3	123,6	37007,2	103
Bird	19028,4	63,7	35219,4	144,8
Sheep	34,0	65,0	35360,9	119,1
Milk	233994,6	101,9	9999,1	115,1

Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]

As evidenced by the data in Table. 2.11, in 2021, there is an increase in the volume of products sold compared to 2020 for such types of products as sugar beets, fruit and berries, pig meat, and milk. Average selling prices of agricultural enterprises in 2021 increased for all types of products except for fruit and berries.

In general, profit and profitability are the primary incentives for the creation of new or the development of existing enterprises in the agri-food sector of the Kharkiv region. To increase the profitability of production and its efficiency, business managers introduce new methods of aggregate and economical use of

resources, develop new products and expand their range for which there may be demand, and apply organizational and technical innovations. Agri-food sectors significantly contribute to the economic development of society operating profitably, contribute to the creation and increase of national wealth, the growth of well-being and social protection of the entire population, and the formation of competitive human capital.

Investment activity is one of the main conditions for the development of branches of the agro-industrial complex, which determines the level of introduction of new technologies and production efficiency. The volumes and forms of investments in business entities contribute to the intensification and economic sustainability of production in the agri-food sector.

Kharkiv region is an agro-industrial region known for its production achievements. Ensuring the necessary investment in the economic development of agri-food sectors in the Kharkiv region is a priority task of state and local authorities. The amount of investment funds (Fig. 2.2) that farmers in the region managed to attract can be grouped as follows.

In general, the structure of financing of economic entities in the agricultural sectors of the region is provided by the following financial institutions: own funds (57.1%), funds of financial and credit institutions (16.3%), funds of the state and local budgets (10.4%), funds of foreign investors (8.2%), funds of domestic investors (4.3%), other revenues (3.7%).

The formation and development of the labor potential of the Kharkiv region largely depend on overcoming the crisis phenomena in the reproductive processes in society because the natural and mechanical movement of the population is a factor in the functioning of the agri-food sector and activities in general.

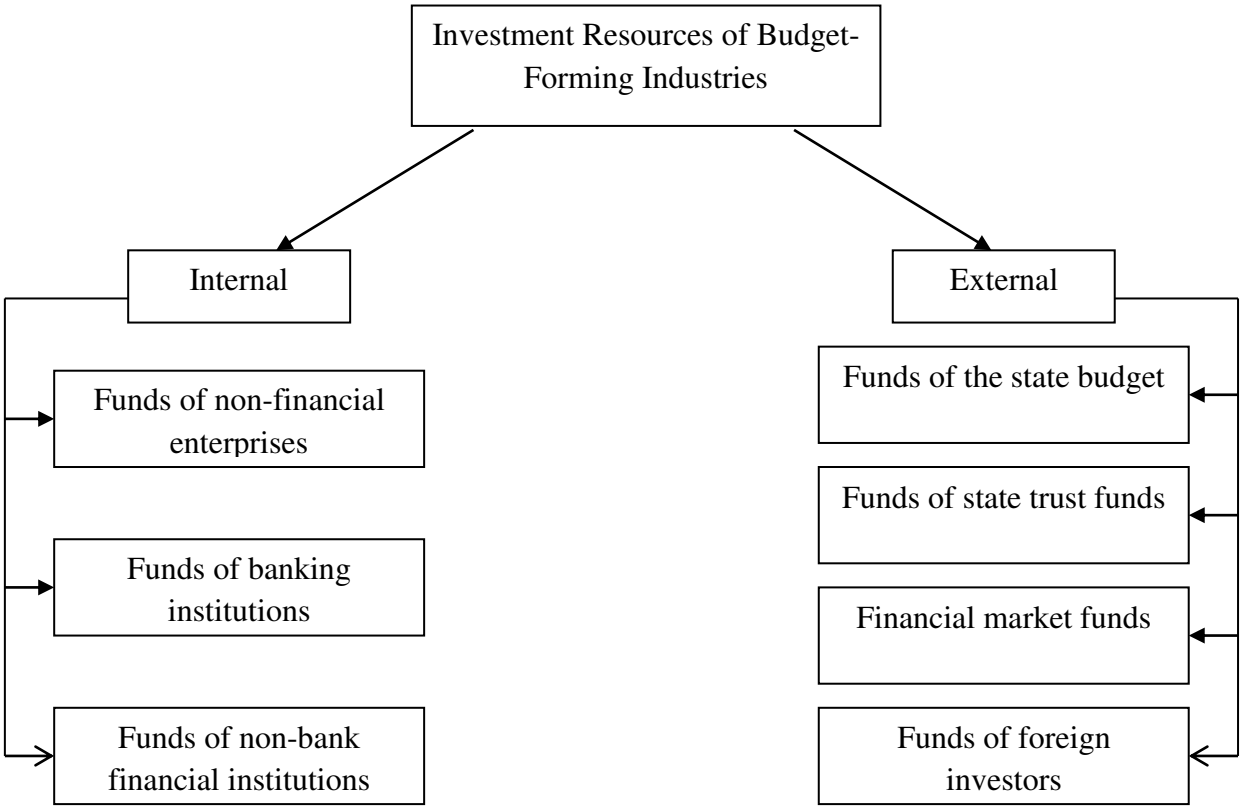


Fig. 2.2. Sources of investment resources in the field of agri-food sector *(developed by the author)*

The analysis of demographic processes in the Kharkiv region shows that in recent years, the demographic situation has deteriorated significantly, which necessitates a more detailed study of the features of population reproduction in the Kharkiv region and regional features of demographic processes, labor resources, the labor market, and its structure. Quantitative and qualitative characteristics of the labor potential of the area are determined by the conditions of demographic reproduction of its natural basis – population, number, gender, age, qualification, and professional structure. The dynamics of the number of rural populations in rural areas of the Kharkiv region are presented in Table. 2.12. As evidenced by the data in Table as shown in Figure 2.12, the number of rural populations is decreasing every year. Only in 2012, the population growth rate had a positive value, in contrast to other years of the study period. Despite the intensification of the state's demographic policy, the value of the overall increase was negative.

Table 2.12

Formation of increase (decrease) in the number of the existing rural population of the Kharkiv region, 2003-2020 (thousand people)*

Years	Population at the beginning of the year	Total Growth	Populace at the end of the year	Rate of population growth (decrease), %
2003	2887,9	-21,2	2866,7	-0,73
2004	2866,7	-18,3	2848,4,3	-0,64
2005	2848,4	-19,4	2829,0	-0,7
2006	2829,0	-16,9	2812,1	-0,6
2007	2812,1	-16,2	2795,9	-0,58
2008	2795,9	-13,5	2782,4	-0,48
2009	2782,4	-13,3	2769,1	-0,48
2010	2769,1	-14,0	2755,1	-0,51
2011	2755,1	-12,9	2742,2	-0,47
2012	2742,2	+2,2	2744,4	+0,08
2013	2744,4	-7,2	2727,2	-0,26
2014	2737,2	-5,9	2731,2	-0,22
2015	2731,3	-12,7	2718,6	-0,46
2016	2718,6	-17,4	2701,2	-0,64
2017	2701,2	7,2	2694,0	-0,27
2018	2694,0	-18,4	2675,6	-0,68
2019	2675,6	-17,1	2658,4	-0,64
2020	2658,5	-24,6	2633,8	-0,93

Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]

It takes place and is caused, for the most part, by social reasons (the intensification of the role of women in social life, mass migrations of rural youth, the lack of traditions of large families in recent decades), economic (insufficient incomes of the general population, poverty, especially in rural areas, unemployment), psycho-physiological (a significant number of divorces, single mothers, poor health and reproductive functions of people), etc. The sex and age structure of the population also has an impact on the socio-economic situation in the region. Not only the ability to reproduce but also the impact on the volume and structure of the labor potential of society, which largely determines the functioning and development of all spheres of life, the characteristics of consumption and consumer markets, depends on it. The age composition of the population is defined

because of natural and migration processes and reflects the influence of historical and socio-economic factors (Table 2.13). Median age is the age that divides the population into two equal parts in terms of volume: one is younger than the median age, and the other is older than it. The median age of the population of Ukraine was 41.3 years (men – 38.5, women – 43.8). The median age was 40.8 years (males 37.6, females 43.9).

Table 2.13

Mean and median age of the population by sex of Kharkiv region, years

Indicators	Middle Age			Median age		
	Both sexes	**Men**	**Women**	**Both sexes**	**Men**	**Women**
Total population	42,6	39,6	45,1	42,3	39,4	45,7
Urban population	42,3	39,3	44,8	42,0	39,1	45,3
Rural population	43,9	41,1	46,4	44,1	40,7	47,7

* Calculated according to the data of the Main Department of Statistics in Kharkiv region

As shown by the data in Table and Figure 2.12, the Kharkiv region has formed a population structure characterized by a high proportion of older and a low proportion of younger people. One of the leading causes of demographic losses in the structure of the population is its narrowed natural reproduction, which is characterized by negative and progressive trends.

It is possible to note a high level of natural population decline and a steady downward trend in the birth rate, analyzing the dynamics of birth and death rates in rural areas of the region for 2015-2021. The process of reproduction of labor potential is more comprehensive than demographic problems. We are talking about the state of health of the population trends in the growth of various diseases, primarily due to unfavorable environmental conditions of human existence.

The problems of restructuring the country's economy have led to a decrease in the overall level of employment and, accordingly, an increase in full, partial, and hidden unemployment, difficulties with the employment of young people, women, and other socially vulnerable segments of the population, which are observed against the background of a general decline in the living standards of the population. The poverty of people, in turn, negatively affects the aggregate demand

of the domestic market, which is an obstacle to the growth of production volumes and affects the budgeting of the leading sectors of the economy of the country and the Kharkiv region.

2.3. Investment and innovation support of the agricultural sector

The implementation of economic transformations, as well as Ukraine's desire to integrate into the world market economy, requires an increase in investment and innovation activity at the economic facilities of all sectors of the national economy, including industries (agriculture, food, and processing industry, electricity, etc.), since the economic, including food security of the state, the level, quality, and competitiveness depend on the degree of their development. In addition, it must be remembered that the activities of industries have always had an essential macroeconomic aspect. This is due, first of all, to the fact that industries form a significant number of financial flows in the country.

According to the Ministry of Agrarian Policy of Ukraine and the Kyiv School of Economics, the total losses caused to the agricultural sector due to the Russian invasion reached USD 6.6 billion as of September 15, 2022. This is 23% of the total value of assets in Ukrainian agriculture (including by category: agricultural machinery and equipment – USD 2885.4 million; warehouses – USD 1062.5 million; livestock – USD 362.5 million; perennial crops – USD 348.7 million; United States; factors of production (fuel, fertilizers, plant protection products) – USD 95.4 million; USA, manufactured products – 1872 million dollars. United States) [111].

The key areas of ensuring the stability of the agricultural sector in the conditions of a full-scale war should be aimed at maintaining the efficiency of the chain "production - processing - storage - supply of food products to the population". It is essential to increase the production of agricultural products, search and create new (including temporary) facilities for storage and primary processing of products and involve all opportunities of the public and private

sectors to supply food to the places of their sale. In the context of post-war recovery, it is necessary to ensure the diversification of the development of agricultural production based on increasing the capitalization and investment attractiveness of agricultural enterprises and the formation of market institutions, which will provide for increasing the efficiency of resources used in agriculture, strengthening the food security of the state, developing a variety of structures, increasing exports of goods with higher added value, and ensuring comfortable living conditions in the countryside [125].

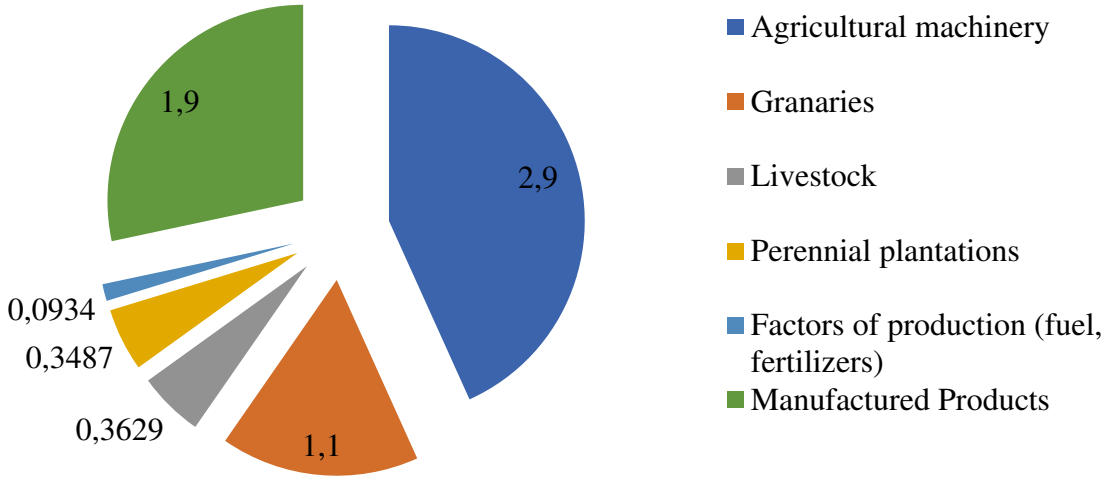


Fig. 2.3 Distribution of losses by categories of the agricultural sector, bln USD

Source: summarized by [127]

Investment and innovation support of the agricultural sector is a complex dynamic process in which the problems of effective use of financial resources, search for additional sources of financing, and attraction of potential investors are closely related to the formation of new knowledge and ideas; technological development of scientific discoveries, inventions, results of research and development; introduction of innovations in the form of breakthrough, critical technologies, advanced machinery and equipment, new types of raw materials, semi-finished products, additives, food products, and non-production goods;

selection of optimal modern forms of organization and management of production, marketing strategies for product sales, competitive presence in the markets, as well as other essential types of investment and innovation activities.

In modern economic conditions, the issues of finding sources of attracting investments, developing based on modern methods of managing economic processes, and introducing systems for the effective use of investment resources to increase innovation activity become essential for the agricultural sector. It is possible to solve these problems only if the compliance of investments with promising innovations, a close interaction of investment, and innovation processes at the objects of economic management of the agricultural sector are determined.

Such an approach necessitates the consideration of investments and innovations as a single investment and innovation system, the successful development and functioning of which determines the level of economic growth and stabilization of the region and the country. That is why the study and substantiation of the scientific and theoretical foundations of the development of the investment and innovation system and the activities of the agri-food sector is today an essential factor in the development of the whole country, its economic growth and, therefore, is a very relevant and significant study.

Issues related to the formation and implementation of processes for ensuring and managing the interaction of investment and innovation processes in the agri-food sector are relatively new and have yet to be studied regarding the specifics of their functioning and development and modern dynamic economic conditions. The progressive foreign experience of management of investments and innovations of economic objects of the agri-food sector needs to be sufficiently studied and generalized.

There are no theoretical foundations for conceptual comprehension of the interaction between investment and innovation. At this time, the main theoretical aspects of management of investment and innovation processes in the context of a shortage of budgetary and other financial resources have not been developed; methodology for the formation of an investment and innovation strategy in an

unstable economic environment, as well as several other essential aspects of managing investment and innovation activities in the agri-food sector.

Globalization changes in the world economy, transformation, and openness of the national economy, cardinal changes in the production structure of the agricultural sector of Ukraine necessitate a rethinking of the criterion of efficiency, cause-and-effect relationships of man with nature and the environment and require new reliable knowledge about the impact of these processes on the development of the national economy and the life of the nation. Therefore, they need a corresponding increase in funding for scientific research, both fundamental and applied. At the same time, it is natural to comply with the provisions of the Law of Ukraine "On Scientific and Scientific-Technical Activities", namely Article 48, according to which "the state provides budgetary financing of scientific and scientific-technical activities in the amount of 1.7 percent of the gross domestic product of Ukraine" [126].

The primary documents regulating innovation activity in Ukraine are the Constitution of Ukraine, the Commercial Code of Ukraine dated 16.01.2003, the Law of Ukraine "On Innovation Activity" dated 04.07.2002, the Law of Ukraine "On Investment Activity" dated 18.09.1999, the Law of Ukraine "On Priority Areas of Innovation Activity in Ukraine" dated 05.12.2012, the Law of Ukraine "On Scientific and Scientific-Technical Activity" dated 07.03.2018, the Law of Ukraine "On Scientific and Scientific-Technical Activity" expertise" dated 05.12.2012, the Law of Ukraine "On State Regulation of Activities in the Field of Technology Transfer" dated 14.09.2006. Innovation processes are related to the creation and dissemination of innovations. They are implemented after the transfer of information and other materials embodied from the field of research into production takes place.

In Ukraine, there is still no clear organizational system that will ensure the implementation of successive stages of the investment process, namely: fundamental research; applied research; design, development, and creation of the innovation process; its development; application of marketing of mass production

and consumption, which does not allow the development of scientific, technical and innovative potential and innovation activity in general [164].

Under the current conditions of development of the world economy, industrially developed countries are transitioning from the industrial type of economic development to the innovative type, that is, to the creation of a scientific and technical basis for production processes. Innovation activity moves directly into the production process, becomes its constituent part, and acquires a different economic content. This type of economic development is determined by the degree of development of innovations and the level of use of the created scientific and technical potential and modern technologies of economic management.

Based on this, the main tasks of science and public administration of investment and innovation activities are the development of modern scientific and technical policy, which includes the most effective mechanisms for mastering innovations and further building up scientific and technical potential in the economy of industries and the country. At the same time, innovative activity in the agricultural sector has certain specifics. This applies to its organization, the specifics of the objects of implementation and subjects of management, financial and economic mechanisms of implementation, risks and their types, and the development of innovation and investment projects and programs.

The features of the modern period of mastering innovations are that the organization and management of this process are increasingly moving to the local and regional levels. This is because it is in the places of application of outdated technologies and energy-intensive equipment, imperfect methods of management, and operational processes that the organization of life activities increases many problems for organizations in the agricultural sector.

The rate of receipt of fixed assets in recent decades cannot cover the rate of their disposal. The problem is also aggravated by the fact that the share of fixed assets, the service life of which has expired or is coming to an end, is growing yearly. Most of the production assets are obsolete and physically worn out, and resource and energy efficiency also require new approaches to their use.

In a market economy, the primary condition for innovation is investment. Since the objects of economic management of the agrarian sphere are classified as labor- and material-intensive, resource-intensive industries with a significant percentage of technically obsolete machine and tractor fleets and traditional technological processes, the financing of their technical re-equipment should be long-term.

Innovations in the agricultural sector include a wide range of technologies, from the chemical composition of plant protection products, the functionality of agricultural machinery, and hybrids of crops and animals to approaches to optimizing the use of inputs, tillage, and fertilizers. In times of globalization and international partnerships, investments in innovation and development can also be made during wartime. For example, Most of the calculations and design can be done remotely. For research that requires infrastructure, the database of partner countries can be partially used, etc. [172].

According to the European Innovation Scoreboard, during 2015-2022, the overall innovation index in Ukraine decreased from 34.72 to 34.24 in 2022. At the same time, during this period, the financing of R&D expenditures by the state decreased by 23.4 points and private business by 11.3 points. On the positive side, the active attraction of venture capital increased by 43.9 points over the period under review. The negatives include reducing human capital by 10.8 points [185].

Analyzing the dynamics of the Global Innovation Index and, accordingly, the rating, it should be noted that Ukraine ranked 71st in 2013, 63rd in 2014, 47th in 2019, 49th in 2021, and 57th in 2022. Over the years, the Global Innovation Index has changed: in 2013, the index was 35.8, in 2014 – 36.3, in 2019 – 37.4. And in 2021 and 2022 – 35.6 and 31.0, respectively [198; 115].

The role of foreign investment in the development of the economy in modern conditions is explained by the following:

- ✓ Firstly, if foreign investments introduce modern, new equipment and high technologies into production and develop the production of products intended for export;

✓ Secondly, it will be possible to establish the production of goods that will replace imports, and on this basis, it will be possible to improve the standard of living of the population;

✓ Thirdly, it provides jobs for the population through the development of small business and private entrepreneurship, acceleration of agricultural production;

✓ Fourthly, it renews and technically re-equips obsolete production facilities, material and technical base of enterprises;

✓ Fifth, they help to create enterprises for the processing of natural resources.

Although it is believed that investing in agriculture comes with significant risks, as can be seen from Fig. 2.4. The dynamics of investments in the industry have positive trends. In 2021, investments in agriculture in Ukraine amounted to almost UAH 70 billion.

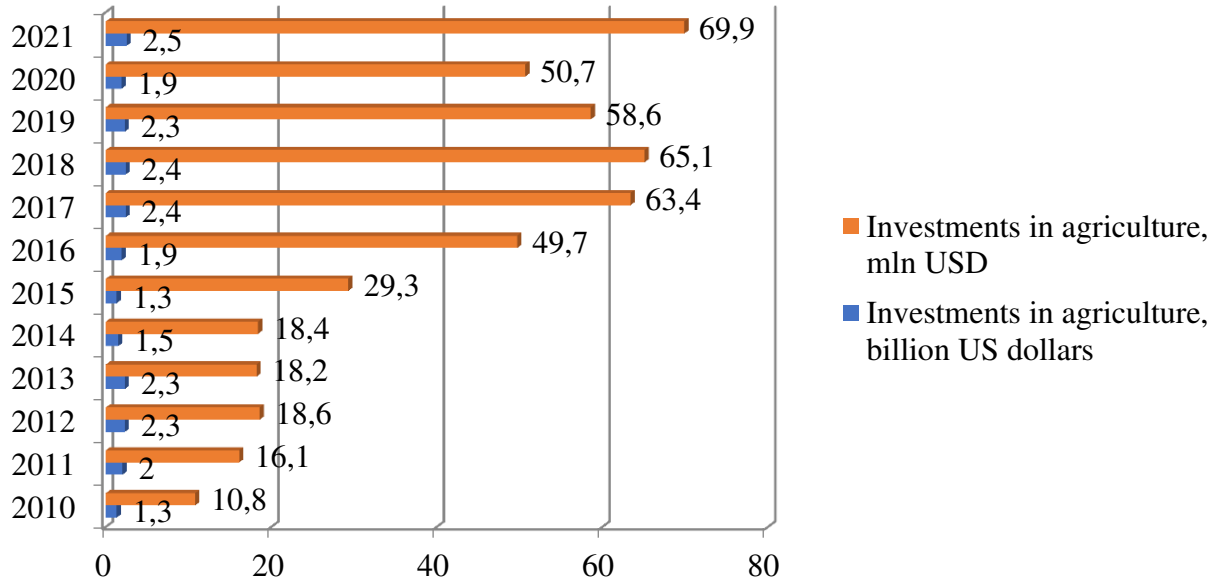


Fig. 2.4. Dynamics of investment in agriculture

Source: constructed according to [38]

According to Yuriy Lupenko, in order to improve the conditions for investment in agriculture, first of all, it is necessary to develop and support the innovative activities of producers: to provide credit support for innovative projects,

to promote projects in scientific and technical activities, to develop international cooperation, to restore the material and technical base of the subjects of the innovative infrastructure of agro-industrial production [107].

With the intensification of capital investments, it is possible to overcome the innovation gaps that have formed in the agricultural sector of the economy due to the insufficient level of financing. Studies have shown that in recent years, the amount of capital investment in agriculture has decreased. The share of investment in the industry has also decreased. If in 2017 it was 14%, then in 2021, we see it halving. (Table 2.14).

Table 2.14

Dynamics of capital investment in agriculture

Indicators	2016	2017	2018	2019	2020	2021
Capital investments in agriculture, UAH million	49660	63401	65059	58555	50189	48080
Share of industry investment, %	13,8	14,1	11,2	9,4	9,8	7,1
The amount of capital investment per 1 hectare of agricultural land enterprises, UAH	2433,3	3218,5	3304,3	2939,8	2502,4	2425,7
Chain growth rates of agricultural investments, %	169,4	127,7	102,5	90,0	85,7	95,8

Source: constructed according to [38]

The integral indicator of the Investment Attractiveness Index of Ukraine recovered slightly in the second half of 2022 – to 2.48 points out of 5 possible. This is comparable to the values in 2020 during the active phase of the COVID-19 pandemic, according to a study by the European Business Association. In the first half of the year, the Index fell by half a point to 2.17 points [59].

Innovative industrialization and the creation of a favorable investment climate in Ukraine can become one of the most essential principles for increasing the volume of foreign investment, which plays one of the prominent roles in the economic development of the country, determining the overall growth of the economy [116].

Priority positions in attracting foreign investment are occupied by such types

of economic activity as industry (40.4%), trade (15.9%), and financial and insurance activities (9.2%).

Currently, in the rating of investment attractiveness, the agricultural sector occupies a low position among the types of economic activity. During the study period, the share of foreign investment in APV remained almost unchanged and amounted to USD 1127.8 million (8.1%) in 2021.

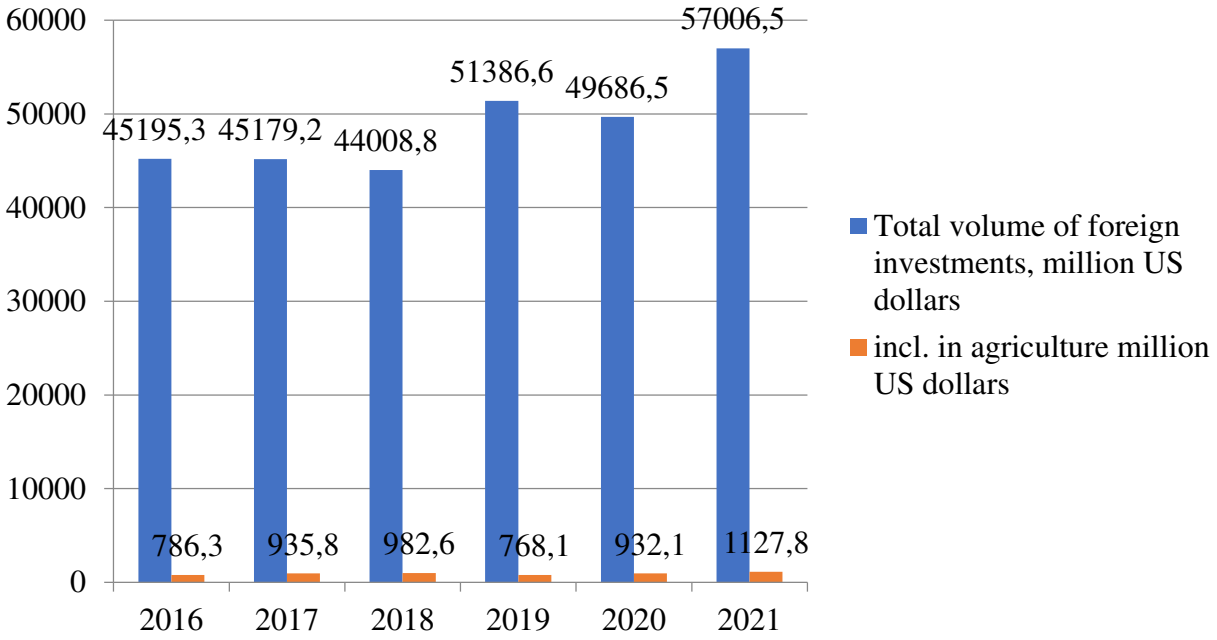


Fig. 2.5. Foreign direct investment in the agricultural sector

Source: calculated by [128].

Despite wartime difficulties, Ukrainian agribusiness plans significant domestic investments in its development and in new equipment. If in 2022 this direction was on pause, then in 2023, companies have relatively adapted to new realities and plan to invest in equipment at the pre-war level. The average amount of planned investments in tractors in 2023 is $10.2/ha, while in 2022, this figure was $7.1/ha. In 2018-2021, the average level of investment was 10.9 USD/ha [147].

Russia's aggression has led to fundamental changes in the provision of agricultural production with agricultural machinery, the expert noted. A significant

part of domestic enterprises – manufacturers of machinery was destroyed, remained in the occupied territory, or is located in the frontline zone, which significantly reduced the volume of Ukrainian agricultural machinery entering the market.

Table 2.15

Average data on agricultural companies' investments in machinery, ($/ha)

	2018-2021	2022	2023
Tractors	10,9	7,1	10,2
Seeders	7	3,8	6,4
Sprayers	5,3	3,2	6,1
Harvesters	3,6	0,1	0

Source: built based on [58]

There are also negative trends in the structure of imports [1].

Firstly, the import of equipment has significantly decreased because part of the territories in the South and East of Ukraine are occupied or in the war zone, which has led to a reduction in demand for agricultural machinery in general, including imported ones.

Secondly, the share of used equipment and cheaper and lower-quality equipment in imports has increased. This is a consequence of the fall in domestic prices for export-oriented agricultural products, the rupture of logistics chains, and a significant rise in energy prices and inflationary processes, which led to a decrease in the efficiency of agricultural production and, consequently, limited the possibility of buying expensive and high-tech machines.

Thirdly, due to inflation, rising energy prices, and rising logistics costs, there was an increase in prices for high-quality and productive equipment from the world's leading manufacturers.

In March 2022, the Government expanded the list of critical imports that are important for agricultural production, including agricultural tractors, agricultural machinery, seeders, etc. The central exporting countries of agricultural machinery

for the agricultural sector of Ukraine are Germany, Belgium, Poland, Italy, and the USA.

In 2022, compared to 2021, imports of tractors decreased by 45.5% (from 30622 to 16689 units), combine harvesters by 30.5% (3029 to 2104 units), sowing equipment by 34.6% (from 6825 to 4465 units), disc harrows by 45.7% (from 819 to 445 units), cultivators by 39.0% (from 61525 to 37523 units), mounted and trailed mowers by 27.8% (from 8571 to 6185 units), etc. In value terms, the reduction was as follows: tractors – by 42.7% (from $548.5 million to $314.4 million), combine harvesters by 37.5% (from $283.8 to $177.4 million), sowing and planting machines by 51.9% (from $165.7 to $79.8 million), disc harrows by 51.2% (from $30.7 to $15.0 million), cultivators by 44.8% (from $53.5 million to $29.5 million), mowers – by 55.0% (from $8.6 to $3.9 million) [131].

Table 2.16

Volume and value of imported equipment in 2021

Type of agricultural machinery	Quantity, t	Cost, thousand USD
Tractors	173168	721744
Machinery and equipment for agriculture Production	45142	343069
Machines and mechanisms for harvesting and threshing agricultural crops crops, lawn mowers and mowers	56435	437807
Milking machines	183	4226
Equipment for viticulture and horticulture	69	893
Incubators	5136	29482
Machines for processing grain crops	1193	16803
Equipment for processing agricultural products Raw	4185	102644

Source: generated by [57]

In the current conditions, which are caused, first, by the war with Russia, there is an unfavorable situation in the agricultural sector of the domestic economy, when low investment opportunities for agricultural producers significantly limit innovation. The introduction of agricultural innovations in the context of innovative industrialization would allow the agro-industrial complex of Ukraine to

strengthen its position in the world market and influence the socio-economic development of the state even more significantly and confidently.

Ensuring the sustainable functioning of agricultural production and the transition to the stage of its practical development involve reaching a new technical and technological level, using more advanced technologies, scientific achievements, and best practices.

It is worth noting the main innovations that are used in the agro-industrial complex both in Ukraine and in the world. These include the following:

• innovative farms (e.g., vertical farms, eco-farms, automated mini-farms, underwater farms, innovative (including home) farms, floating eco-farms, etc.);

• modern electronic cartographic systems (for example, the use of digital terrain models and digital thematic maps);

• logistics solutions (e.g., Navizor.com);

• technology park monitoring systems (e.g., GPS tracking, log-book);

• the use of drones (for example, for aerial photography (area or representative) and its analysis, soil survey, crop protection, application of Trichogramma, chemical treatment, etc.);

• automated analytics and planning systems (e.g., electronic agrochemical field passport, electronic circulation);

• use of mobile applications and smartphones (for example, to track and control cargo, cars, and drivers; communication between/with employees; control of the integrity and sealing of goods, etc.);

• management and communication systems with personnel, customers, and partners (specialized CRM and HRM systems);

• quality and health monitoring tools (e.g., automated herd management systems);

• IT in horticulture (for example, the Pantheon Farming system: helps to increase efficiency, create a modern "truthful" weather forecast, pest control, in particular, electronic traps Trapview, etc.), etc. [60; 61; 110; 151].

Intensification of innovative development processes by increasing the

volume of investment flows in the agri-food sector should be accompanied by an increase in the degree of responsibility for the results of implementing agricultural innovations on the part of investors and producers. The emergence of new innovative products and solutions should consider the key priorities and criteria for the safety of the results of innovative transformations. Such requirements are especially relevant in the agro-food sector since they form the basis of food security of society, the conditions for preserving the health of present and future generations and protecting the environment and its main components.

For the successful development of innovative processes in agriculture, it is necessary to fulfill several conditions that allow an increase in the investment attractiveness of the industry by increasing the growth rate of technical renewal, accelerating capital turnover, developing appropriate social infrastructure in agriculture, timely and targeted support from the authorities, etc.

The carried-out analysis reflects the situation in the investment sphere of innovative projects, which has developed in the country. Developing measures for state financial support for the investment of innovative projects in the agri-food sector, reducing investment risks, and improving the regulatory and legislative framework, it is necessary to pay considerable attention to the preparation of programs that would consider both the general principles of investing in innovative processes in the agri-food sector and the peculiarities of the development of innovative processes in each region separately.

Conclusion to Chapter II

1. As a result of the study, the factors that determine the competitiveness of the sectors of the agri-food sphere are identified, among which environmental factors occupy the central place. The external environment of agri-food sectors refers to all conditions and factors that arise in the environment, regardless of the activities of a particular industry, but which have or may affect its functioning. Analysis of the external environment is the process by which it is possible to control

factors external to industries to identify opportunities and threats to them. An analysis model has been developed that provides the ability to predict opportunities, make a contingency plan, develop an early warning system in case of possible threats, and develop strategies that can turn former threats into profitable opportunities.

2. A detailed study of the competitiveness of agri-food sectors was carried out on the materials of the agri-food sector of the Kharkiv region. A unique complex of natural agricultural and recreational conditions and resources characterizes the Kharkiv region. In terms of population, the Kharkiv region ranks 2nd in Ukraine, and in terms of population density per 1 km2 – one of the last. At the beginning of 2022, 2580.6 people lived in the region. People, and for each square kilometer of territory – 82.7 thousand people. A negative factor in all types of activities is the low population density.

3. At the end of 2021, the total volume of gross regional production amounted to 319796 million USD. and increased by 24% compared to the previous year's production. The volume of services sold amounted to 204906 mln UAH, exports of goods and services amounted to 1801 mln USD, imports – 2339.8 mln USD According to the structure of products sold, the region has an industrial specialization. However, earlier, the overall structure of the regional product was dominated by agri-food sectors to increase the efficiency and competitiveness of activities and sectors of the economy of the Kharkiv region. There is a significant dependence of the region's economy on internal and external factors of management and market conditions for products, services, capital, and resources.

4. Total output by type of economic activity in 2021 amounted to 44260 million tons. UAH, of which the share of agriculture, hunting, and forestry amounted to 10755 mln UAH., or 24.3%, the share of the processing industry is 11330 million tons. UAH. or 25.6%, the share of trade is 5222.7 mln UAH. or 11.8%. In 2021, the financing of innovative activities in the industries of the Kharkiv region from own funds amounted to 78010.7 thousand UAH. UAH, which is 97.4% of the total investment, while financing from domestic investors

amounted to 1313.7 thousand UAH. UAH, which is 1.6% of the total. This indicates insufficient state support for financing innovation activities in the industries of the Kharkiv region.

5. Gross value added of agriculture, in the total gross value added in 2021, decreased and amounted to 23.6%, against 26.1% in 2000, which is -2.5% less. This indicates the instability of the economic efficiency of the industry. However, the dynamics of its changes are positive. The share of the industry's products in the total volume of its output also has a positive tendency to increase over a long period.

6. The share of new fixed assets for the specified period in the Kharkiv region increased from 0.016 in 2016 to 0.03 in 2021 during 2016-2021. The coefficient remains stable at 0.03. Considering the renewal coefficient for the main types of economic activity, such sectors of the economy as trade, repair of cars, household goods and personal items, financial activities, and construction are being modernized more dynamically.

7. The yield of crops, in particular, cereals in 2021 compared to 2020, decreased by 2.5%, sugar beet - increased by 15.2%, and soybeans - decreased by 3.2%. Mustard yields increased by 57%. The yield of potatoes and vegetables remained at the level of last year's indicators. This is due to the significant amplitude of agro-climatic conditions of the zone of risky agriculture, to which the Kharkiv region belongs.

8. The average annual milk yield from one cow of farms of all categories in 2021 was 5783 kg. In 1990 - 2979 kg, the average annual shearing of wool from one sheep of farms of all categories in 2021 was 46 tons, and in 1990 - 982 tons, the average annual egg production of chickens of farms of all categories in 2021 was 481.1 million pieces, and in 1990 – 1106.7 mln pcs. For the period 2000-2021, the dynamics of the average annual milk yield. Increased markedly, and the average annual wool shear, on the contrary, decreased. Thus, dairy cattle breeding as an industry is competitive.

9. The achieved level of technological efficiency of production has a significant impact on economic efficiency, primarily due to the existence of fixed costs, which, as you know, manufacturers cannot influence in the short term. Indicators of technological efficiency reflect the specifics and features of agriculture associated with the functioning of the primary means of production in this area – land and living organisms as means of production. They make it possible to carry out a comparative assessment of production efficiency in dynamics and the territorial context for individual industries, enterprises, and regions.

10. Studies have shown that in recent years, the amount of capital investment in agriculture has decreased. The share of investment in the industry has also decreased. If in 2017 it was 14%, then in 2021, we see it halving. Innovative industrialization and the creation of a favorable investment climate in Ukraine can become essential principles for increasing the volume of foreign investment, which plays one of the leading roles in the economic development of the country, determining the overall growth of the economy. Priority positions in attracting foreign investment are occupied by such types of economic activity as industry (40.4%), trade (15.9%), and financial and insurance activities (9.2%). Currently, in the rating of investment attractiveness, the agricultural sector occupies a low position among the types of economic activity. During the study period, the share of foreign investment in APV remained almost unchanged and amounted to USD 1127.8 million (8.1%) in 2021.

11. In 2022, compared to 2021, imports of tractors decreased by 45.5% (from 30622 to 16689 units), combine harvesters by 30.5% (3029 to 2104 units), sowing equipment by 34.6% (from 6825 to 4465 units), disc harrows by 45.7% (from 819 to 445 units), cultivators by 39.0% (from 61525 to 37523 units), mounted and trailed mowers by 27.8% (from 8571 to 6185 units), etc. In value terms, the reduction was as follows: tractors – by 42.7% (from $548.5 million to $314.4 million), combine harvesters by 37.5% (from $283.8 to $177.4 million), sowing and planting machines by 51.9% (from $165.7 to $79.8 million), disc

harrows by 51.2% (from $30.7 to $15.0 million), cultivators by 44.8% (from $53.5 million to $29.5 million), mowers – by 55.0% (from $8.6 to $3.9 million).

12. Intensification of innovative development processes by increasing the volume of investment flows in the agri-food sector should be accompanied by an increase in the degree of responsibility for the results of the agricultural innovations on the part of investors and producers. The emergence of new innovative products and solutions should consider the key priorities and criteria for the safety of the results of innovative transformations.

CHAPTER III.
FORMATION OF A SYSTEM OF STRATEGIC MANAGEMENT OF COMPETITIVENESS OF AGRI-FOOD ENTERPRISES

3.1. Financial and economic mechanism for ensuring competitiveness

The importance and priority importance of the agricultural sector for achieving global and national sustainable development goals have led to the realization of the need to find practical tools and mechanisms for strategic management of the competitiveness of agricultural production. Effective development of the agricultural sector and rural areas in the future is possible only based on sustainability and inclusiveness, which objectively requires the use of an integrated approach to managerial decision-making. The effectiveness of strategic management of agriculture will be expressed in how quickly and adequately the management system will respond to new requirements, opportunities, challenges, and threats formed by the competitive environment. The aggravation of the global problem of hunger in the world significantly actualizes the task of ensuring national food security and expanding Ukraine's participation in the global agricultural food chain. Inclusion of value in European and world agri-food chains today is a priority with the strategic task of developing the agricultural sector, the solution of which requires increasing the level of competitiveness of domestic agricultural raw materials and products of its food processing. To find strategic mechanisms for managing competitive agricultural production at the initial stage, it is necessary to outline the mission, vision of long-term goals and objectives of sustainable development of the agricultural sector, search for effective mechanisms capable of ensuring the achievement of the set goals and objectives of agricultural management.

A combination of many factors of the external and internal business environment influences the competitiveness of agricultural products. The agrarian sphere is one of the most specific types of economic activity, the development and

performance indicators of which, in addition to a set of factors of financial, resource, and managerial nature, are influenced by factors of natural and biological origin. Under the structural transformation of the Ukrainian economy and the formation of a free market for agricultural land, the importance and complexity of land capital management have increased. The current challenges of the global concept of sustainable development, which Ukraine has joined within the framework of its strategic partnership with the EU, also actualize the environmental factors of ensuring competitiveness and considering the principles of protection of the biological world. Traditionally, an essential component of agricultural production factors for rural areas is determined by the level of provision and quality of labor resources. The problems of creating and mutually beneficial for all participants in the filling of the system of infrastructural support of agricultural production with commodity flows still need to be solved. At the same time, the combination of all these factors and ways to solve existing problems related to their management and use are mediated by the level of investment and financial support and fair and full access of agricultural producers to financial capital markets.

Inclusive provision of business entities in the agri-food sector with financial resources is a crucial condition for the further development of its industries and the solution of the strategic task of increasing the level of competitiveness. The central core of the mechanism of inclusive provision of agriculture is the investment factor, which forms the prerequisite for the intensification of innovative processes both in production and in the further development of rural areas.

In the context of the ongoing military conflict in Ukraine, the agricultural sector remains practically the only type of economic activity that shows signs of stability, profitability, and sustainable development, maintaining the multiplier effect for the national economy. At the same time, global and European trends give rise to the need to increase the competitiveness of domestic products in the agri-food sector, the potential of which will be caused by the state of financial support of industries.

Substantiation of the strategy of financial provision of management of competitiveness of enterprises in the agri-food sector requires considering the system of socio-economic and environmental factors and trends in further development. In this context, it is essential to consider the requirements of sustainable development priorities, which today and shortly will dominate the European market and economic agricultural space. Among the main factors that should be taken into account by the algorithm for developing a competitiveness strategy are modern transformation processes and industry trends, economic processes in which social and environmental values emerge, factors of political instability, fiscal factors, price and credit factors, and their volatility. The current political crisis in the country and the ongoing military conflict also cause macroeconomic instability of financial support mechanisms, which is manifested in an increase in inflation, depreciation of the national currency, an increase in credit and investment risks, and a decrease in the level of attractiveness of the domestic agri-food sector for foreign capital. Considering the totality of these factors and factors, as well as measures and tools for their consideration in practice, is the basis for determining the financial support strategy for business entities in the agri-food sector (Fig. 3.1).

The main goal of the financial and economic mechanism for increasing the competitiveness of business entities in the agri-food sector should be the sustainable and inclusive provision of all participants with financial resources. This requires the search and systematic interaction of sources of financial resources, the policy of distribution and use of financial flows, and management of results that ensure the increase in the strategic potential of co-availability of agricultural products. According to the structural-element methodical approach to strategic management, the relationship between all elements of the financial mechanism should ensure sustainable financial flows, the volumes of which are sufficient to meet the interests of all participants in agri-food chains. Sustainable, inclusive financial flows are a central financial mechanism for increasing competitiveness. The mechanism must combine and ensure the interaction of all other components

to form them, which, by their content nature and specificity of action, can be attributed to two functional blocks: organizational and economic (Fig. 3.2).

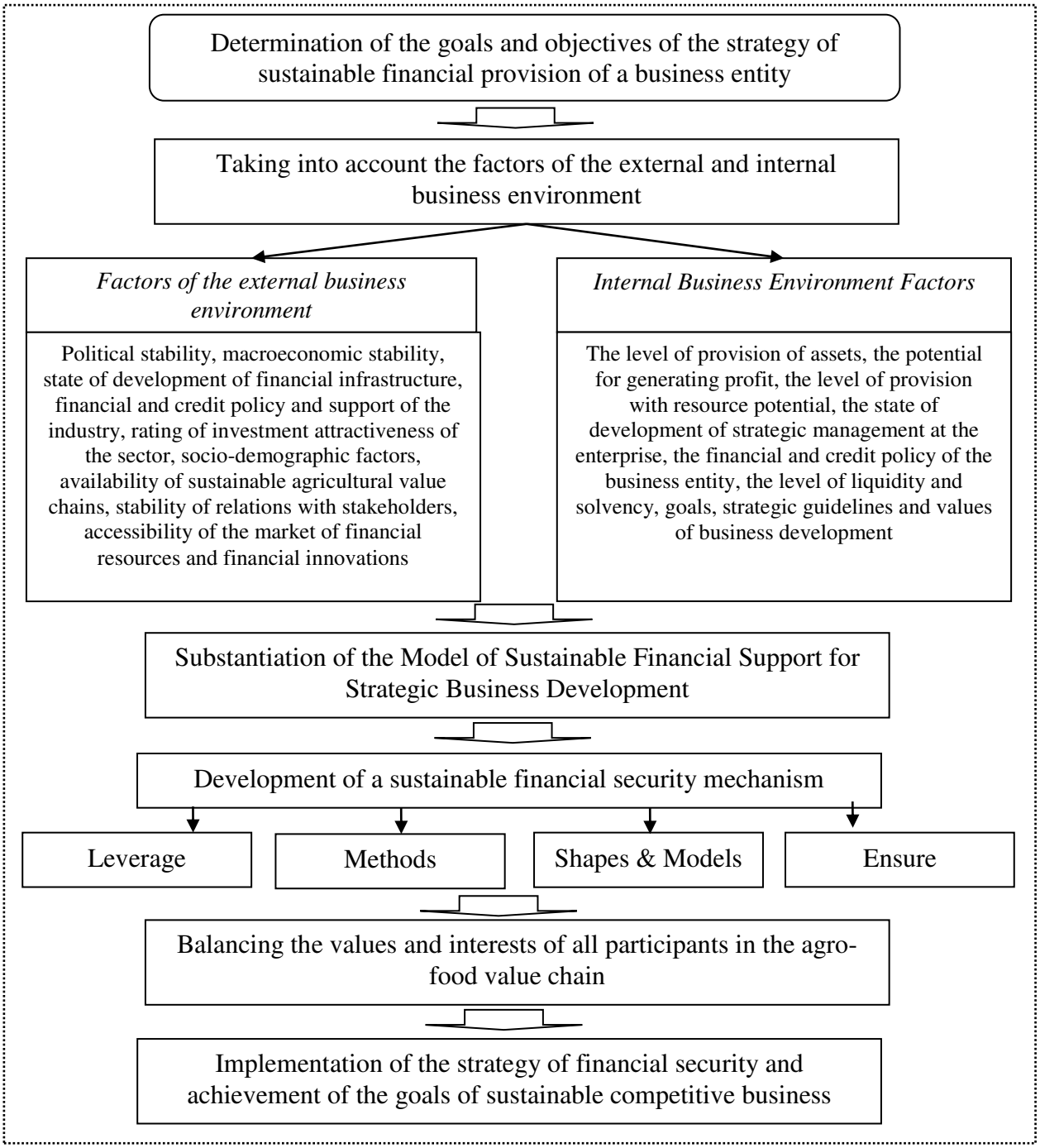


Fig. 3.1. Algorithm for implementing the strategy of sustainable financial support for competitive agricultural production

Source: author's development

One of the main levers of the financial and economic mechanism for ensuring an increase in the competitiveness of business entities in the agri-food sector from a strategic perspective is investment. Increasing the volume of

attracting private investment flows into the sector should catalyze innovation and economic transformations and form the prerequisites for environmentally friendly production. Agricultural production must increase by at least 60% annually over the next 40 years to address global food security. Given the limited natural and productive agricultural potential of the EU countries, Ukraine has unique opportunities to become a full-fledged participant in European and global agri-food value chains. A critical condition for achieving this ambitious goal is to ensure the competitiveness of domestic agricultural products and products of their food processing.

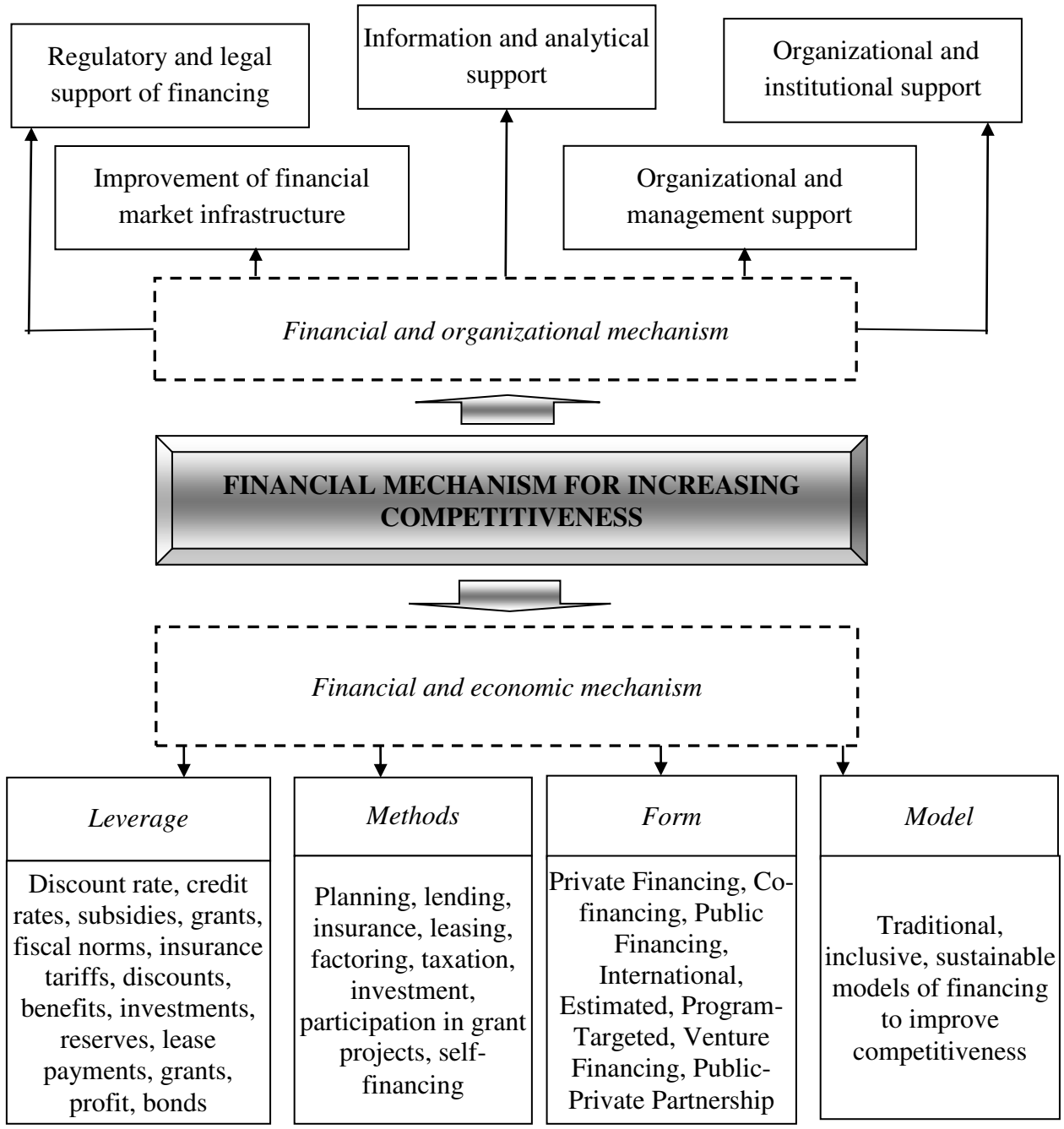


Fig. 3.2. Architecture of the financial mechanism for increasing the competitiveness of business entities in the agri-food sector

Source: Author`s development

Transformational shifts, inherent in the agrarian sector of the economy in the present period of development and, in the lowest perspective, require the improvement of existing and the search for new tools for attracting financial resources to the industry. Financial resources should ensure the renewal and modernization of the material and technical base of production and infrastructure support for the agri-food market to create a long-term potential for agricultural competitiveness first. The requirements and trends of sustainable, inclusive development of the agricultural sector and rural areas are radically changing the perception and standards of quality and safety of agricultural products and food products. The EU food market is focused on safe organic products and has a powerful arsenal of tools that protect national agricultural producers. In this regard, adopting the relevant segment in the European market requires Ukrainian agricultural producers to increase the competitiveness of products, first, based on their quality characteristics. This requires structural changes in the system of material and technical support of the production process, investments in improving the agricultural management system focused on quality, safety, and organic agricultural production, and creating an appropriate system of control, certification, and promotion of such products to the market.

In our opinion, one of the ways to solve the problems of financial and credit support for the agri-food sector is to overcome the decline in production through new sources of attracting funds, the most promising of which are profit, stock resources, leasing, and cheap long-term loans. When using such an alternative source of financing as the stock market, business entities in the agri-food sector can raise funds by issuing shares and bonds. To develop an effective stock market, first, it is necessary to create a robust infrastructure, the basis of which should be, in addition to the clearing house and depositories, competitive stock and commodity exchanges. The introduction of such a source of investment will help

business entities to increase their profits through direct sales. To date, the source mentioned above of funding needs to be given more attention both at the state level and in the regions.

Shortly, it is expedient to create an exchange trade in each administrative district center, through which to carry out trades to sell products competitively in the domestic and foreign markets. Funds received from exchange sales and when collecting customs duties for importing imported products, which are analogous to domestic ones, should be directed to subventions to resident industries (enterprises). At the same time, the creation of stock and commodity exchanges or their branches on the ground will complete the process of structuring the market for goods produced by enterprises, and the state will be able to influence the price situation in the consumer market effectively.

Leasing remains a promising method of the financial mechanism of business entities in the agri-food sector. Despite the long-term practice of implementing this tool in the practice of material and technical equipment of producers, in particular, the agricultural sector, improving the organizational and economic foundations of leasing operations still needs to be addressed. Leasing, as a form of financial and material support, has a low characteristic feature, among which flexibility and reduction of the degree of risk of obsolescence and physical wear of equipment for the lessee; the possibility not to account for leasing assets on the balance sheet, the availability of depreciation benefits and convenient credit and financial conditions of contractual relations. For the period up to the beginning of 2022, the number of agricultural machinery received by agricultural producers based on leasing had a constant upward trend in 2021. The number of units of equipment rented was 5874 units (with an increase of 22%). The prominent banking institutions that provided financial support to farmers were OTP Leasing, Kredo-Bank, Alfa-Leasing and, ULF Finance, Credit Agricole [148]. The most popular types of agricultural machinery that became the object of leasing agreements were tractors, combines and tillage equipment.

Modern leasing activity is characterized by various forms and varieties of

leasing, models of leasing contracts, and legal norms regulating them. World practice has developed numerous variants of leasing relations. They are not separated from each other by sharp boundaries, and the features of one or another species can be combined in different ways in one agreement. Moreover, sometimes, it is enough to slightly change the conditions of one already known type of leasing as an entirely new type of leasing is obtained. Therefore, at present, there needs to be a precise classification of leasing agreements for their rational organization of implementation.

In practice, the most used are:

1. Fixed total lease payment agreed upon by the parties and paid following the procedure established in the leasing contract. Usually, a payment schedule indicates that the first lease payment is made on the day of acceptance of the objects of the transaction and then periodically monthly, quarterly, twice a year, or annually with or without a separate demand.

2. Payment with advance payment (deposit) implies that the lessee provides the leasing company with an advance or contribution in the amount of 15.0 – 20.0% of the purchase price of the object of the leasing agreement when signing the contract and the remaining 80.0 – 85.0% is paid after signing the protocol of acceptance (commissioning) or within 3-5 years every quarter.

3. The minimum lease fee is the amount of payments during the lease term that the lessee must make, plus the amount that the latter must pay if he intends to purchase the leased object after the expiration of the lease agreement. At the same time, it is assumed that the lessee receives the right to buy this object at a price significantly lower than the market price on the date this intention is realized.

4. Indefinite rent is not set as a fixed amount but on a specific basis - as a percentage of the volume of sales, the amount of funds used, market rates of loan interest, etc.

To improve the organizational and economic foundations of leasing operations as a tool for the financial mechanism for increasing the competitiveness of business entities in the agri-food sector, we consider it expedient to supplement

them as part of the option of prolonged options for the purchase of equipment (Fig. 3.3).

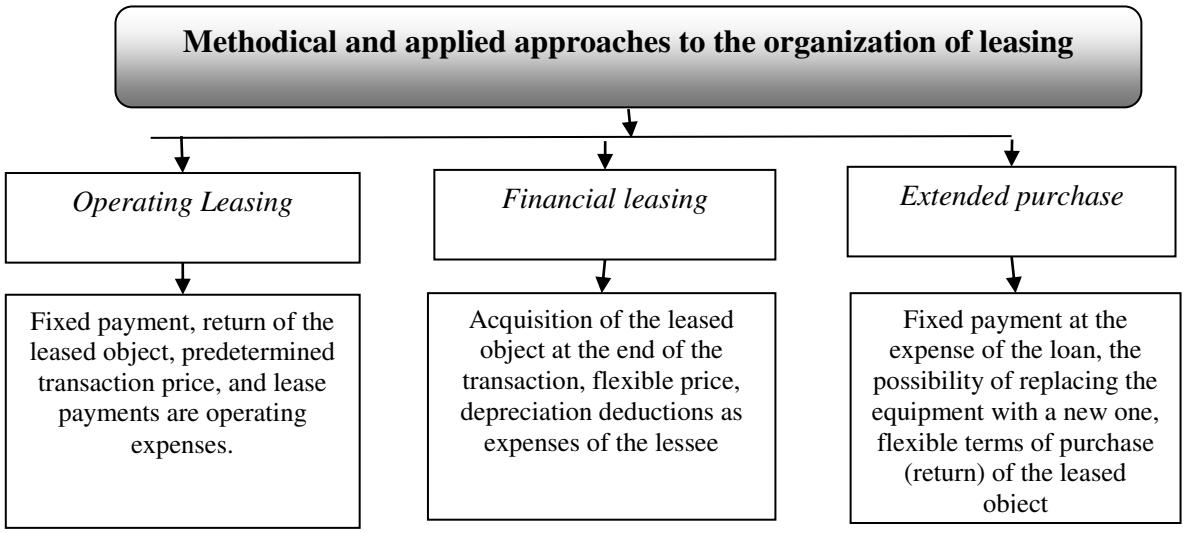


Fig. 3.3. Methodical approaches to the organization of leasing financial relations in the agri-food sector

Source: author's development

Distinctive features of the prolonged purchase of the leased object are the possibility of its replacement with new, more relevant models during the period of the lease agreement (after a year or season of use), preferential financing of the purchase of equipment at the expense of loans of the leasing company, on which interest is not accrued, minimization of the cost of maintenance and repair of leased equipment, the possibility of extending the term of the agreement. Upon expiry of the lease agreement, the leased object shall be returned to the lessor with the possibility of its redemption by the lessee provided for in the agreement.

In most cases, rental rates are set not only depending on the lease term but also on the intensity of use of its subject. For example, when renting cars, the rent is charged for each day of rental and additional mileage over the established norm. At the present stage of economic activity, there are many methods for calculating lease payments, which are based on both simplified methods and complex ones based on quantitative financial analysis or financial and economic calculations.

There are three forms of lease for the term of lease relations: long-term (leasing) for a period of more than three years, medium-term (hiring) for a period of one to 3 years, and short-term (rental, rental, or charter) for no more than one year.

Depreciation on used equipment can be accrued by the usual method depending on its book value, service life, and established depreciation rate, as well as by the accelerated depreciation method, in which the rate of annual depreciation of deductions for whole restoration increases, but not more than twice. In addition, business entities of agri-food sectors, along with the accelerated depreciation method, can write off additionally, as depreciation deductions, up to 20.0% of the initial cost of fixed assets with a service life of more than three years in the first year of operation of machinery and equipment. The procedure for calculating depreciation and applying accelerated depreciation of the active part of fixed assets is determined by the Regulation on the procedure for calculating depreciation deductions for fixed assets.

Calculation of payments for additional services of the lessor (PU) is carried out according to the formula:

$$Pu = Rk + Ru + Yy + Rd, \quad (3.1)$$

where *Rk* is the business trip expenses of the lessor's employees,

Roux - expenses for services (legal advice, information on the operation of equipment, etc.),

Yy - advertising costs,

RD - other expenses of the lessor's company.

The methodology for determining lease payments is the basis for calculating the lease payment, regardless of its type. At the same time, in each specific case, the calculation of lease payments will depend on the specifics of the leasing agreement, which are determined by the type of leasing, as well as on the type of lease payments chosen by the lessor and the lessee.

Modern leasing mechanisms should be built on sustainability, reliability, and inclusiveness of access to financial and logistical resources for all participants in the agri-food sector. It is expedient to organize leasing services for producers

within the unified regional agri-food value chains to solve this problem. In addition to agricultural producers, food industry enterprises, financial and credit institutions, leasing companies, regional credit, and sustainable development departments, which should develop and facilitate the implementation of agri-food leasing programs, should be integrated into such chains. Private lines of capital, public-private partnership, and cooperation should also be an essential element. With the help of such an association, it is possible to achieve a synergistic effect between leasing and financing agri-food value chains. The practice of foreign countries to create structural units specialized in leasing support, which would be integrated into agri-food chains as part of national agricultural banks, may also be effective.

Improving access to financial resources and complete financial security of all participants in the agri-food sector can be ensured based on sustainable and inclusive development. The priority is the awareness of the agri-food business of the strategic priorities of sustainability to do this, implementing the principles of sustainable development in the management concept. Current trends in global investment are characterized by a clear trend of growth in the volume of capital investments by investors in sustainable programs and projects in the field of food security and the agri-food sector. Sustainable finance is strategically focused on donor capital investment in those business entities, farms, and food processing enterprises that achieve predetermined sustainability indicators and outcomes. Promising forms of sustainable financing of participants in the agri-food sector can be the finance of inclusive agri-food chains, sustainable bonds, and sustainable and sustainable subsidies (Figure 3.4).

In recent years, inclusive financial support programs for participants in agri-food value chains based on fair and equal access to sources of financial resources and capital markets have become widespread. Examples of such projects, the experience of which is helpful for Ukraine, are the INCLUSIF (International Fund for Agricultural Development) project, which brings together about 500 thousand beneficiaries: agricultural producers, banking institutions, and the private financial

sector. Among the tools that provide inclusive access to financial resources are digital financial products in conservation, microcredit, and insurance. Innovative financial technologies and products, which manufacturers access through digital platforms and services, are already becoming the basis for their use. Such platforms increase the availability and inclusiveness of credit resources, contribute to the optimization of financial transactions, and increase their overall efficiency. The following can become a tool for digital financial support for participants in the agricultural food sector: alternative credit platforms (peer-to-peer lending, crowdfunding, online lending); blockchain technologies and SMART financial contracts; mobile payment platforms and microloans; online insurance and online subsidies.

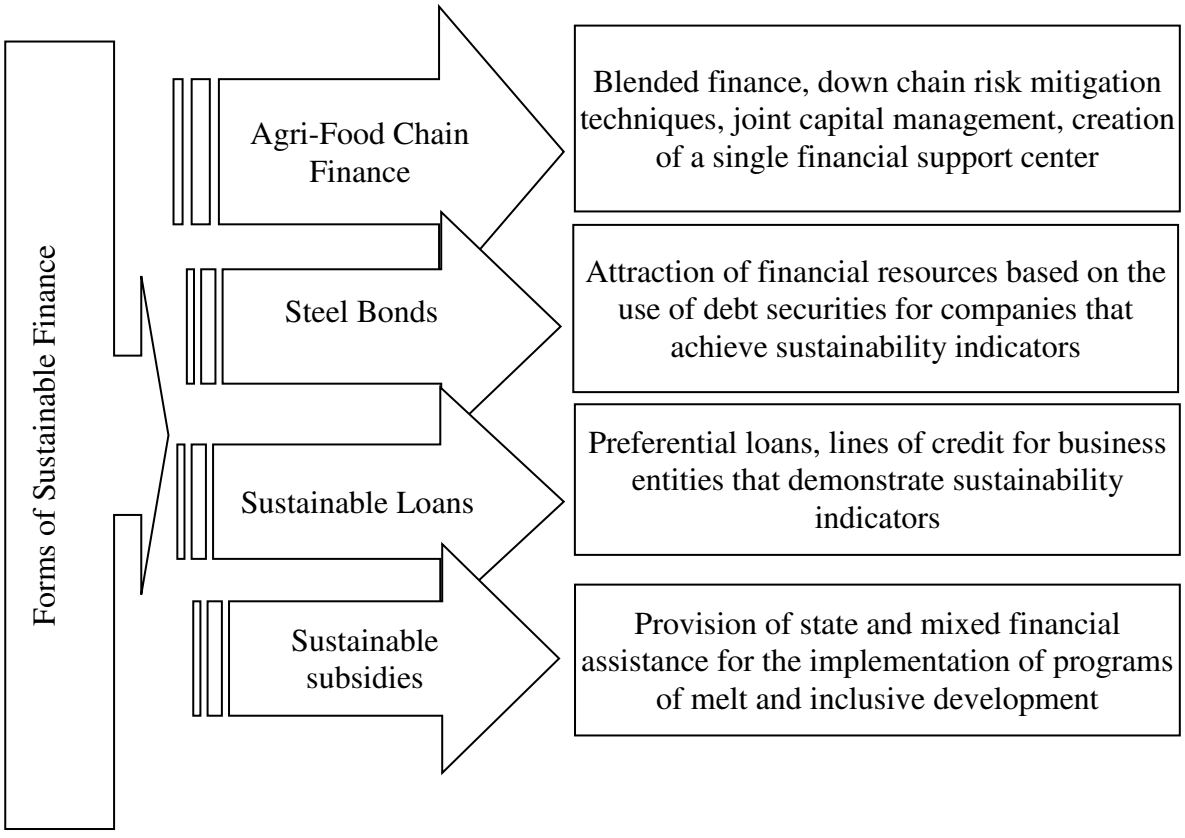


Fig. 3.4. Forms of sustainable financial support for business entities in the agri-food chain

Source: author 's development

Supply chain financing in the agri-food sector is a new form of sustainable

financial security that is becoming widespread in global practice. This instrument is based on trade finance based on open accounts with the help of letters of credit. This form allows the shipment of products to the buyer until the settlement obligations are repaid. At the same time, on behalf of the buyer, the banking institution provides the supplier with a letter of credit by agreement of the parties. Such a mechanism can be used to stimulate and encourage supply chain financing and the creation of sustainable economic ties within the complex through financial innovation and technology.

Prospects in improving the level of provision of business entities in the agri-food sector with financial resources for creating mixed financing mechanisms are the joint use of capital attracted from various sources based on the organization of public-private partnerships. The mechanism of action of mixed finance is presented in Fig. 3.5.

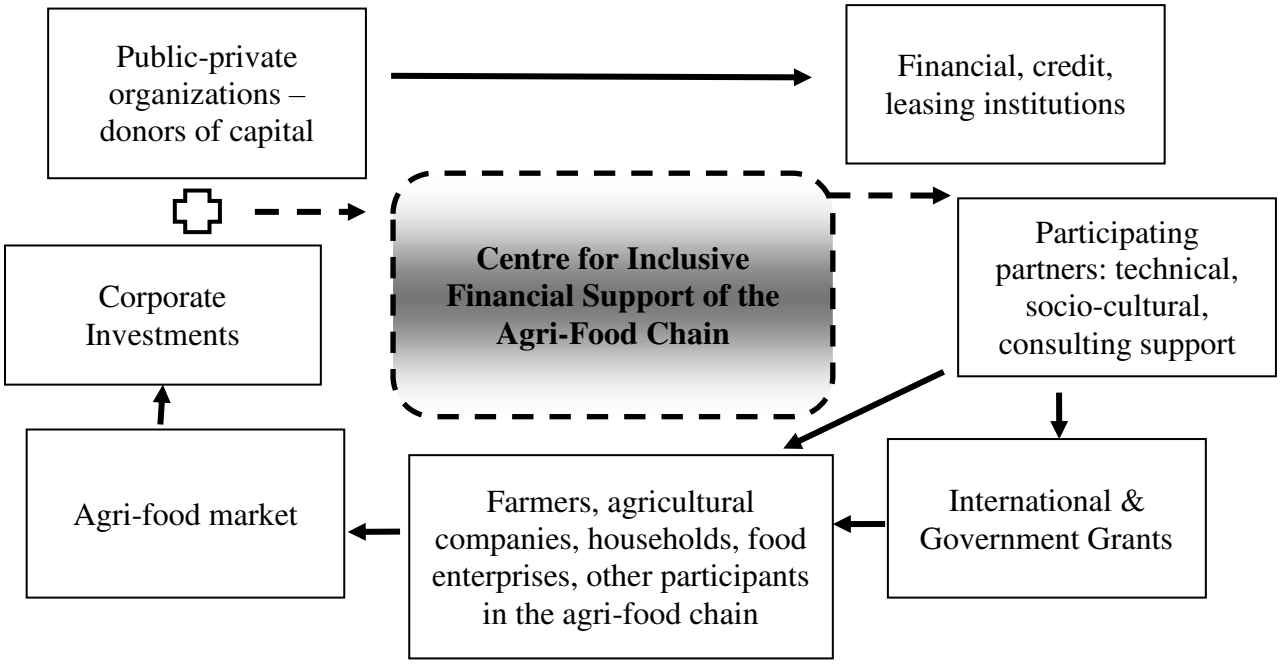


Fig. 3.5. Algorithm of mixed financial provision of participants in agri-food value chains

Source: author's development

Sustainable financing with environmental priorities and values at the center of strategic solid potential is defined. A new financial model for providing the agri-

food sector is "green" financing. The attraction of additional financial resources for implementing projects related to producing environmentally friendly agricultural raw materials and safe food products is one of the tools of a long-term financial mechanism. Recipients of capital are participants in the agri-food sector who maintain the ecological balance and will participate in global and national projects related to environmental conservation. The production of environmentally friendly, high-quality, and safe food products has considerable potential for competitiveness not only in the national but also in the European and world markets. Socially responsible investments today are already becoming a sustainable practice of investment policy and the behavior of capital owners. This approach ensures that financial resources are allocated to initiatives that promote environmental sustainability.

In agriculture, green financing is associated with the transition to organic farming, the development of precision agriculture, the restriction of the use of chemicals, and crop and livestock production. Food industry enterprises can attract "green" financial investments for projects of material and technical modernization of production based on environmental friendliness, renewable energy sources, product quality control systems, waste minimization, and the creation of closed cycles within a single agri-food value chain.

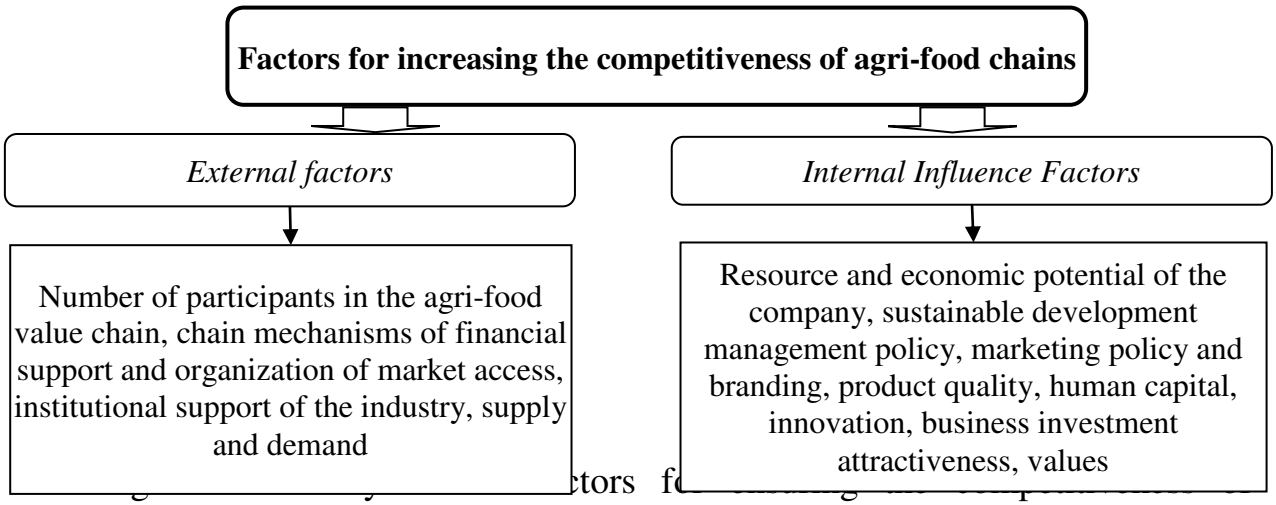
3.2 The main ways to increase the competitiveness of agri-food enterprises

Increasing the competitiveness of business entities in the agro-industrial sector is a strategic task in the context of Ukraine's economic recovery and gaining sustainable competitive positions in the world market. Solving this problem requires substantiation of specific methods and tools for rapidly adapting domestic producers to market changes and the institutional environment.

Success in achieving sustainable competitive positions of agri-food enterprises in the market, according to modern minds, is determined by the clarity

of the orientation of commodity and pricing policy to the needs of buyers, the level of innovation activity, and the strength of the company's competitive potential. Institutional and market changes already require new policies and proposals from the management of companies based on values, competencies, innovations, and responsible consumer behavior. Resources, inclusive opportunities, products, shared values, and innovations become levers that define a single system of interaction between businesses and consumers. Within the framework of the system of sustainable agri-food chains, a new concept of market relations is formed: resources - values - opportunities - innovation - responsible behavior - results. Such elements, based on shared long-term values, are essential for businesses, consumers, and society alike. The long-term common values that underlie the new paradigm of increasing the competitiveness of agri-food enterprises are the priorities of product safety and quality, environmental friendliness, sustainability, and inclusive development, considering the interests of present and future generations. The level of competitiveness is formed not only at the level of individual producers but also at the level of the agri-food value chain as a whole and, because of scale and synergy, creates additional inclusive opportunities to improve the competitive position of producers in the market.

Increasing the competitiveness of producers in the field of agricultural products within the unified agri-food chains is associated with low factors, which, by the nature of their actions, are divided into external and internal. Considering and managing the system of these factors forms the prerequisites for substantiating a new competition policy based on sustainable and inclusive development (Fig. 3.6).



tors fo

participants in the agri-food value chain

Source: author's development

Increasing the level of competitiveness of agri-food enterprises from the strategic perspective is inextricably linked with the issues of ensuring sustainable development and obtaining long-term competitive advantages based on sustainable values and priorities. This implies the need to consider sustainable and environmentally neutral methods of production in the policy of managing the activities of business entities, the result of which should be new competitive goods that are original in their quality parameters. At the same time, the new competitiveness policy should be aimed at strengthening the links between agri-food chains and the market, consumers, and society, taking into account the interests of all parties. The priorities for achieving the goals of increasing the competitiveness of business entities, along with commercial values, should be increasing the added value of agro-industrial production, ensuring sustainable incomes for all participants in the agri-food chain, improving the use of resources and gradually transitioning to circular business models; formation of responsible consumer behavior and maximum satisfaction of consumer demand.

The impact of external factors on the competitiveness of participants in agri-food chains should be adjusted in terms of the formation of an effective institutional policy of the agro-industrial complex, which should contribute to the implementation of strategies to provide the population with affordable and high-quality food products and stimulate the external competitiveness of domestic

enterprises. Future institutional policy should contribute to the maximum information and analytical support for the creation and functioning of sustainable agri-food value chains and form macroeconomic and regulatory prerequisites for the functioning of the financial mechanism of the APV sphere. An essential element of the institutional policy is the organization of monitoring of agri-food markets, the organization of the creation of digital platforms for producers and potential investors, ensuring the rapid implementation of standards and procedures for certification of organic and food production, and their labeling. An important direction for modern agri-food production remains the continuation of the unification and harmonization of the system of food safety standards with EU requirements. The main drivers of increasing the competitiveness of agri-food products are concentrated in the fields of innovation, environmental and quality standards, corporate social responsibility of business, and branding (Fig. 3.7).

Studies of the current level of competitiveness of agri-food enterprises have allowed us to identify several prominent areas in which decisions should be made to improve their competitive positions further. Among the main ones, it is necessary to note: 1) production, which is associated with the commercial priorities of business performance and is focused on the traditional model of using resources and organizing the technical and technological process. The transition of agri-food production to eco-principles and the abandonment of the traditionally high level of intensification based on the use of chemicals and GMOs is also taking place at a relatively slow pace.

2) Problems in the organizational and managerial plane of APV enterprises are primarily related to the awareness and perception of the concept of sustainable and inclusive development in the future, which significantly narrows the strategic potential for increasing investment attractiveness and attracting financial resources. At the present stage of the development of integration ties, the aspects of building equal, fair, and inclusive relations between different participants in agri-food chains, taking into account the criteria of scale, business reputation, and production size, also need to be improved.

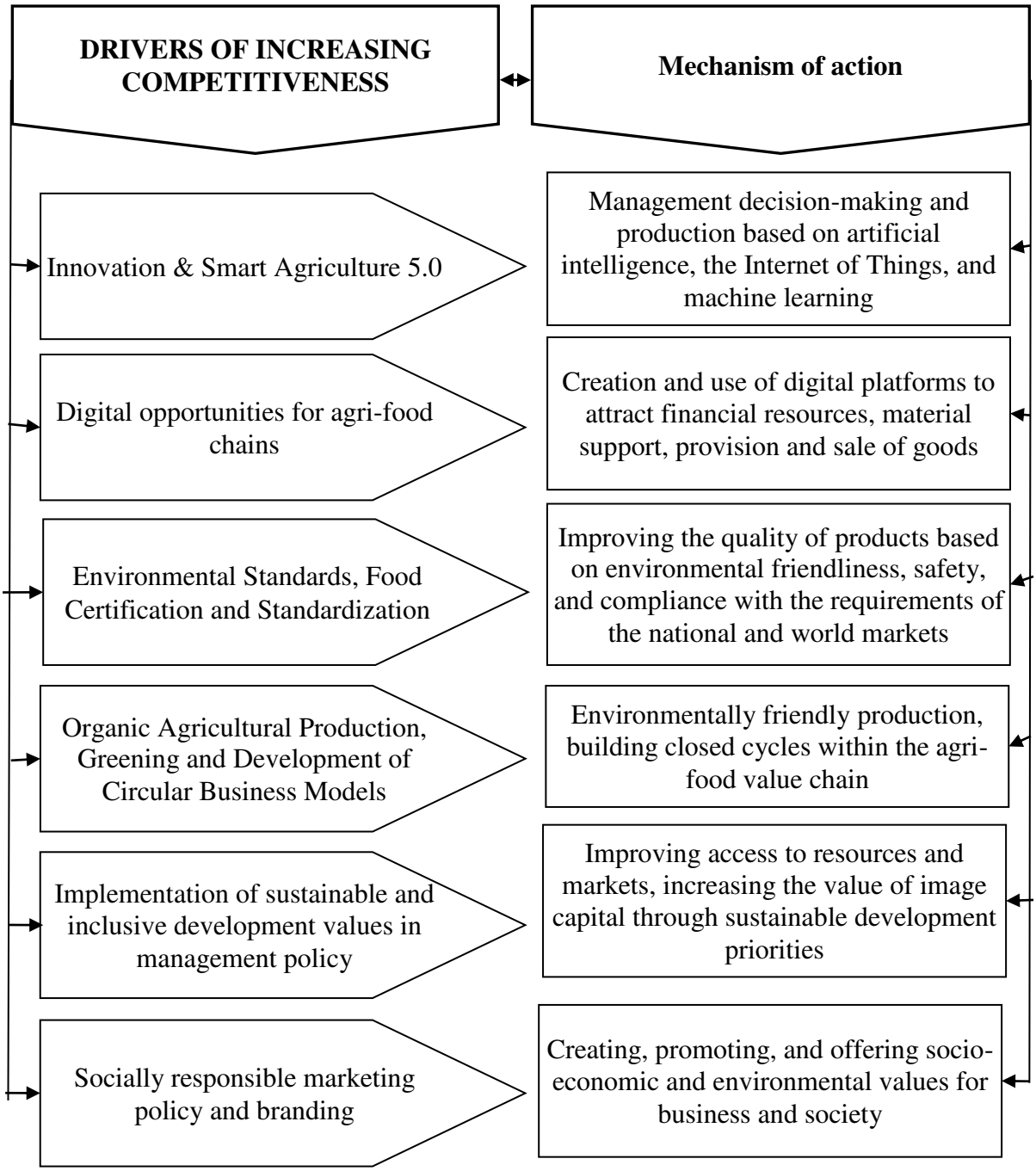


Fig. 3.7. Drivers for increasing the competitiveness of business entities in the agri-food chain

Source: author's development

3) The most critical issues for agri-food enterprises are the organization and implementation of practical marketing activities. Suppose the production plane of management has traditionally been at the center of management's attention and has undergone constant improvement and adaptation to market factors. In that case, the

marketing management system still needs to be a more vital link for many APV participants. To the greatest extent, this is typical for agrarian formations, most of which (except for large agribusiness entities) need a well-grounded marketing strategy, marketing staff, and their brands.

It is expedient to consider production and market innovations as critical tools for their elimination, considering the identified problematic aspects of the current state of management of competitiveness of agri-food enterprises.

Production innovations (innovations in existing business models), which form the basis for increasing the competitiveness of agri-food production, should ensure the modernization of the material and technical base of enterprises, taking into account the priorities of organic agricultural production, environmental friendliness, circularity, which are the basis for the production of high-quality, safe, unique and valuable food products for society. As a supplement to the system of production innovations, it is necessary to innovate of an organizational and managerial nature, which will provide comprehensive support for implementing production innovations. Such organizational and managerial innovations can improve the philosophy of the existence of agri-food enterprises based on sustainability and inclusiveness of development, deep perception and corporate dissemination of sustainable business values, adjustment of business strategies and mechanisms for their implementation, search for new financial mechanisms for access to resources, retraining of company personnel, appropriate improvement of the organizational and production structure of business management. Such production and management innovations will become a source of increase in production capacity, contribute to increasing the volume of production of competitive products, and create market competitive advantages.

At the same time, the full realization of competitive advantages, which are formed in production based on the use of production, organizational, and managerial innovations, is possible only in the system with the use of marketing innovations, which today are problematic for a significant number of subjects of the agri-food complex.

Marketing (market) innovations form resource advantages for enterprises through the search for new ideas and ways to obtain market information, optimization of commodity and pricing policy, creation of new sales channels, organization of stimulation of its promotion in the market, communication policy, branding policy, etc.

Marketing innovations provide an active influence of the management system on objective and subjective factors of competitiveness through the operational restructuring of the product range, distribution policy, and customer service, considering the improvement of communication tools and image reputation of the company. Marketing factors and tools are becoming increasingly important in the context of transformational changes in the food market and global and national concepts that have already been identified as a strategic priority for developing the agri-food sector of Ukraine and the EU. A set of such factors, which in the future will determine the strategic guidelines of competitiveness and the innovations necessary to achieve them, is presented in Fig. 3.8.

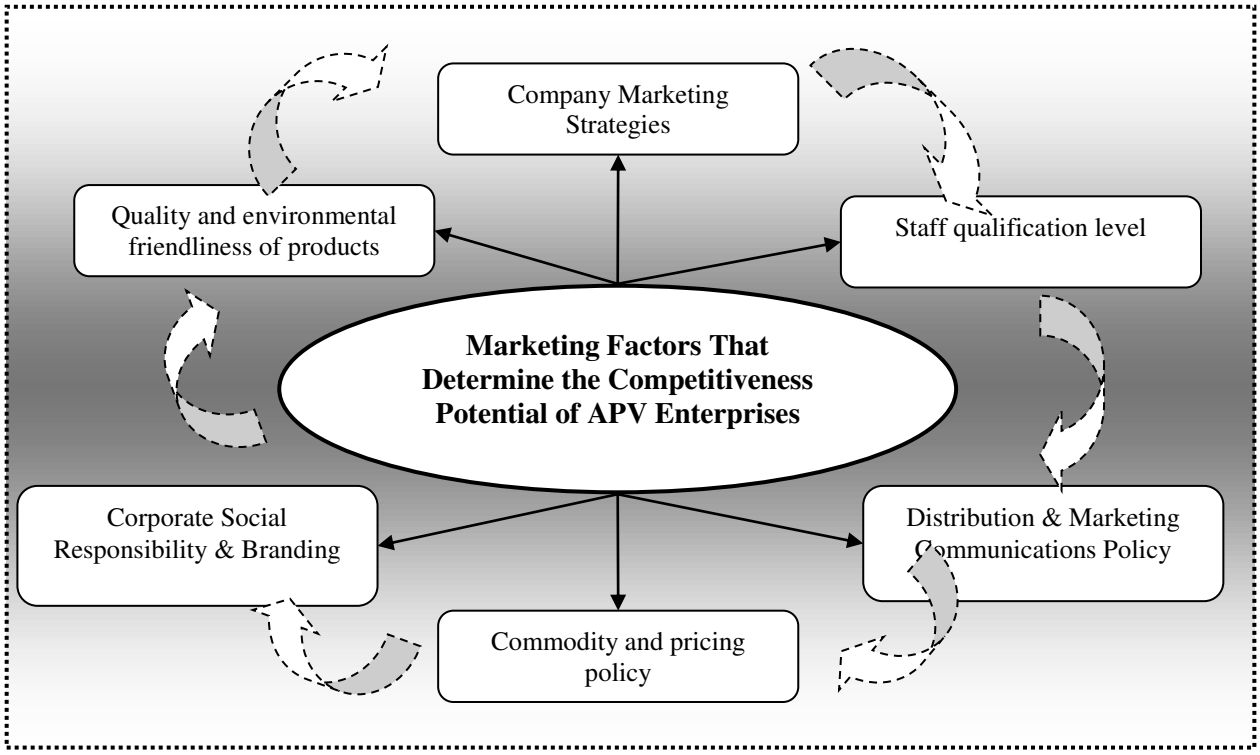


Fig. 3.8. A set of marketing factors that determine the competitiveness of enterprises in the agri-food sector

Source: author's development

Considering that fundamental changes cannot constantly confirm the technological level of production of economic objects in the agri-food sector due to the traditionality of production and stability of technologies in the industries, as well as that there is not always an objective possibility of creating unique goods and the entire range of products is practically mastered by the leading economic objects of the industries. It seems expedient to consider it as the main direction of the formation of competitive high-order benefits for agri-food industries to build a reputation and establish close and established relationships with consumers.

The formulation of this task requires solving the question of what requirements the consumer at the present stage imposes on the manufacturer of his products. The set of expectations and needs of consumers can be represented as follows: consumers want peace and security; consumers are very grateful to someone who can take care of their life problems that are difficult for them to cope with themselves; many business facilities grow and thrive because they are more comfortable for their consumers; consumers want personal attention and communication; consumers want quality; Sometimes consumers want to be partners of the enterprise; consumers want to be able to return things or products that do not entirely suit them; consumers want to be enjoyed and satisfied; Consumers want to live in an atmosphere of predictability about business objects or consumer markets.

The noted expectations and demands of consumers form the reasons for making a purchase, which include the motives of safety, affection, comfort, pride, and novelty. The reputation of business objects determines the safety motive, the quality mark of the goods, and the guarantee of money back for the purchase. The motive of attachment is formed with the help of the quality of service and an effective system of discounts. The motive of comfort is determined, first, by the ease of use, quality of the product, and high quality of products. The motive of pride is determined by belonging to a particular social class and status possession of rare things. The novelty motive shapes the consumer's desire to purchase new

products.

The solution to many of the above aspects is manifested in ensuring proximity to the consumer, establishing trust and personal connections with consumers, organizing personalized marketing, and satisfying and retaining regular customers. In practice, these areas can be implemented through the development of branding tools, improvement of trade organization, brand and assortment policy, and measures to form the social mission of the enterprise and the industry.

The essence of branding is to form a long-term consumer preference for the brand. Branding in a competitive environment is caused by the need to distance oneself from the goods of competing business entities. The objective needs to apply branding in the market of food and other goods is also explained by the fact that in each region of the country, there are manufacturers who simultaneously try to enter the markets of neighboring regions and, at the same time, experience pressure on their domestic market from competing producers from these regions. Within the framework of branding, there is a unified system for the creation and distribution of advertising information, the task of which is to determine the place of the trademark in the minds of consumers.

Thus, branding forms the psychological attachment of consumers to a particular brand or product. Psychological adherence to brands comes from the fact that consumers have a limited ability to perceive and analyze marketing information since "making decisions about what to buy, it is probably in the brain of complete logical calculations, taking into account all the pros and cons of availability and what is available in comparison with each other.

Instead, people research information about products and commodities exclusively and only then make decisions based on extensive and general ideas and their feelings about which product is best for them. It is these general ideas and feelings that determine the degree of commitment to a particular brand. The pride of a sustainable brand is consumer loyalty, a low degree of vulnerability to the marketing actions of competitors and crises, higher profits, inelasticity when the price level increases, increased profitability and effectiveness of marketing

communications, and additional opportunities for brand promotion.

A significant difference between a trademark and a brand (trademark) is that a trademark allows you to identify the products of a particular manufacturer. In contrast, the perception of a trademark is accompanied by various associations, images, and expectations of consumers, which ultimately determine consumer choice. The most reliable tool for the development of branding and the formation of psychological attachment to the brand is the development and improvement of branded trade in the market. Corporate trade performs two essential organizational functions in modern conditions: firstly, it allows the control of the channel of product sales, and secondly, it ensures a continuous flow of funds, thereby improving the turnover and financial condition of business entities and the industry.

Branded trade can solve the problems of forming a psychological attachment to the brand and satisfy consumer motives with the help of a high culture of service, offering the most diverse range of products, freshness of products sold, and tastings. The task of the company trade is also to establish effective feedback between the consumer and the manufacturer on quality, prices, and product ranges.

Through the system of branded trade, it will be more effective to implement various measures to stimulate sales. Such events include drawing drawings on cashier's checks and distribution of free samples of products and souvenirs. Implementing these measures proposed by us will lead to a decrease in the profitability of production. However, their high stimulating effect can increase the turnover, hence the mass of profits, and increase the competitiveness of economic facilities in the agri-food sector.

Employees of branded trade, analyzing daily, weekly, and monthly sales volumes, must provide relevant information, which will optimize the range of products produced in terms of production volumes of individual commodity items. At the same time, the analysis of average daily sales volumes will optimize the schedule and volumes of delivery of finished products and eliminate product deposits.

In addition, employees of the company trade should collect and summarize the wishes of consumers on product quality issues, as well as conduct surveys and questionnaires, the effectiveness of which will be pretty high, by appealing to the target audience with a certain degree of commitment. Particular attention should be paid to the professional training, skills, and qualities of sellers since this factor is decisive in establishing trusting relationships with consumers.

Along with the considered directions, to form consumer loyalty, it is necessary to use the means of general communication influence. To do this, it is necessary to constantly present in the information field of the regions of sales of products the developed combinations of informational, radio broadcasting, institutional advertising, and reminiscent. The tasks of informational advertising are to inform consumers about the arrival of new goods for sale, about price reductions, and the introduction of a system of discounts, lottery drawings, etc.

The tasks of material advertising are

the formation of preferences for the brand,

changing the perception of the properties of the product,

persuading them to make a purchase.

Reminiscent advertising is designed to maintain awareness of the product and places of purchase, support commitment to the brand, and remind of the need to purchase the product shortly. Institutional (prestigious) advertising is designed to form and maintain a fertile image of business objects, which affects the competitiveness of agri-food sectors.

In our opinion, in addition to conducting a planned advertising campaign, it is necessary to implement a combination of the following measures: firstly, the constant development of various forms of communication with consumers, such as holding consumer conferences, participation in exhibitions, fairs, seminars, tastings in the most prominent retail outlets, the availability of contact numbers for direct communication of consumers on quality issues, the range of goods of business entities and the expression of claims. Secondly, there is the use of propaganda in the media to disseminate commercially important information about goods and

objects of economic activity in the agri-food sector based on establishing long-term mutually beneficial relations with managers and specialists of leading media.

The active development of digitalization processes in public life, particularly in the economy, forms new requirements and trends for marketing strategies for the competitiveness of companies. The global Covid pandemic has created powerful incentives for the digitalization of marketing processes and contributed to the emergence of new methods and tools to intensify the marketing policy of sales-oriented businesses. Under modern conditions, the space and marketing channels for business are actively changing, the use of which will allow agri-food enterprises to maintain competitive positions in the market in the constant struggle for buyers and consumers of their products and their brands. The study of the marketing environment of agri-food companies allowed us to determine the proposed complement to the existing tools of communication policy and sales promotion policy at the expense of promising digital tools (Fig. 3.9). By the nature of their use, they are means of mass communication, are affordable in terms of price factor for both businesses and consumers and have a high potential for productivity in the formation and use of information and analytical flows of marketing information.

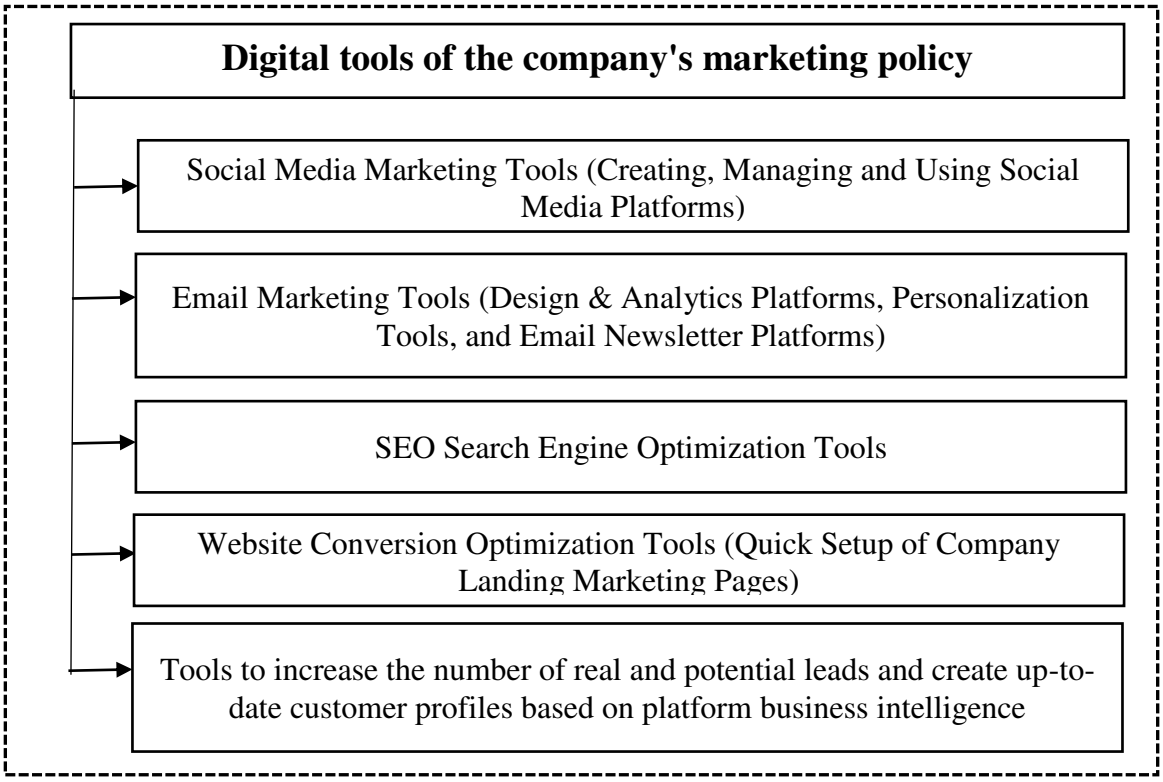


Fig. 3.9. Recommended digital tools for improving the marketing policy of agri-food enterprises

Source: author's development

Active socialization of public life and increasing its scale in the digital plane actualizes the SMM tools of companies' marketing activities as one of the most effective ways of their communication policy. Marketing SMM tools (social media marketing tools) are a way to convey information about a product to the consumer using well-known social networks such as TikTok, Facebook, Instagram, and others. A clear and rapid growth trend determines the activity of using social networks by potential buyers. It has massive potential for communication with the contact segment audience of potential and actual consumers. In addition, social pages in e-networks have a solid information base about the needs, preferences, and tastes of potential buyers, which is helpful for marketing strategies for achieving leadership and ensuring competitiveness. Social networks, through SMM tools of active e-marketing, form favorable prerequisites and opportunities for creating a positive attitude among buyers about the brands and products of agri-food companies.

The set of e-elements of marketing is complemented by platform tools that provide opportunities for large-scale analytics, market segmentation, and the search for individual approaches to meeting the consumer needs of buyers. Examples of such tools that form competitive advantages in the field of e-marketing are Google Analytics (a system for collecting, evaluating, and analyzing data), WordPress (ways to manage the content of companies' official websites), SendinBlue (a type of platform that implements the tasks of individual personalization and sending emails to potential buyers) and others.

The tools of SEO marketing are up-and-coming shortly for the development of marketing activities of agri-food enterprises. This is the primary tool for ensuring the competitiveness of companies in the e-space. The global pandemic has contributed to an extraordinary intensification of the development and popularization of electronic search services among buyers. Today, the SEO (search engine optimization) strategy of product promotion on the market forms the possibility of raising the company's website in the list of users' search queries (potential buyers). All search services and platforms form a large-scale list of sites and links offered to the search engine for the query made. At the same time, according to the results of the marketing audit, the activity of search engines (buyers) is usually limited to researching and familiarizing themselves with the information of companies on the first 1-2 pages of the Internet search network (for example, Google). Accordingly, the most significant competitive opportunities and prospects will be given to those agri-food companies, the reinforcements to the sites that appear in the first positions of the search engine. The main stage in the formation of SEO marketing should be the optimization of the websites of agri-food companies or the creation of an integrated site for all participants within a single agri-food value chain. At the same time (as a concomitant factor in ensuring competitiveness) an exceptional role (as a concomitant factor in ensuring competitiveness) is given to the qualitative and quantitative level of providing companies with IE specialists.

In practice, tools for optimizing the conversion of company websites have

already proven themselves. With the help of such tools, marketers of agri-food companies and their associations can collect information about visitors, their electronic behavior, and criteria for choosing a site. This allows you to gain competitive advantages by optimizing the web design of the site, its content, visual perception, and further communication with the consumer segment. Typical website conversion optimization (CRO) tools are web analytics, behavioral analytics, and monitoring.

A set of digital marketing tools to increase the competitiveness of agri-food enterprises will only be complete with lead generation tools. Finding and attracting new customers and building a customer base is one of the main strategies to achieve a competitive advantage in the market.

Digitalization and modern electronic services contribute to solving this critical problem and achieving the company's leadership among competitors. With the help of online networks, websites, and social networks, companies can identify and attract new potential buyers and turn them into regular users of the company's products (services, works) and supporters of their own brands. This happens through the formation of relevant data about buyers who leave their contacts and individual information about themselves on e-domains and company resources. Based on such information, the needs and preferences of customers are evaluated and carefully analyzed, the processes of collective and individual communications are formed, and the natural customer base is expanded.

The measures proposed by us, with their systematic and comprehensive application, can create stable, long-term, trusting relations between business entities and consumers, to ensure the psychological attachment of consumers to the manufacturer's trademark, to increase the reputation of business entities and, consequently, to create high-order competitive advantages and ensure the long-term competitiveness of agri-food sectors.

However, considering the issue of forming the reputation of business objects, we consider it necessary to dwell on some aspects in more detail. The constituent parts of the image are the organizational and managerial culture of

business entities, internal social and psychological climate, the image of business objects among consumers (quality, design, brand awareness, service, discount system, price, corporate identity), a business image of industries (business reputation, integrity, reliability, loyalty to partners, information openness, business activity), social image (sponsorship, patronage, participation in solving environmental problems, employment, health care, assistance to specific individuals) and the image of industries for government agencies (the importance of products for the region, participation in regional social programs, compliance with laws, provision of jobs).

A positive image increases competitiveness in the market by attracting consumers and partners and facilitating access to resources. The social image of agri-food sectors is also an essential tool for the formation, first of all, of consumer opinion since information about the promotion of industries to social programs will always find a response among domestic consumers. Thus, developing these areas will consolidate the reputation of business entities in the agri-food sector among consumers and the degree of their commitment. Consideration of the image of economic objects as a derivative of several components corresponds to the modern understanding of the role of marketing in managing the market activity of economic objects and the allocation of the integrating function as its primary function.

Integration marketing pays special attention to market entities, which has an impact on the activities of economic entities in the agri-food sector. The main principle of classical marketing – market orientation – within the framework of integration marketing is interpreted not as customer orientation but as a focus on all influence groups – personnel, suppliers, sales partners, and competitors. At the same time, the final effectiveness of marketing depends on the degree of integration of individual activities and the effectiveness of coordination between them.

This understanding of marketing confirms the validity of the chosen method of studying the competitiveness of economic objects of the agri-food sector as a

system of interdependent factors for increasing competitiveness as a system of competitiveness factors used in the practice of economic objects. When analyzing the competitiveness of an individual economic entity and making sound management decisions, it is necessary to use a wide range of indicators that characterize the practical activity of economic entities and indicate the practical work and interaction of all departments. This circumstance allowed us to develop a system of indicative management of decision-making to increase the competitiveness of agri-food enterprises (Table 3.1).

The proposed system combines a set of decisions that have both internal and external orientation of action, allowing the form of an integrated approach to decision-making to ensure competitiveness as a generalizing characteristic of the activities of economic entities of the agri-food sector in market conditions and can be used within the framework of operational management and control. Using certain organizational and economic foundations and forming high-order competitive advantages based on the proposed methods will ensure sustainable competitiveness of agri-food sectors.

However, it should be noted that the development of agri-food sectors largely depends on a factor not regulated by internal means of influence of economic entities – aggregate demand in the market. The elasticity of demand by incomes of the population and high potential demand suggest that an increase in the living standard of consumers will cause an expansion of aggregate supply and demand, ensure the efficient operation of all elements of the production system, allowing them to develop within the framework of the most sustainable form of economic interaction – a cluster of competitive sectors of the agri-food sector.

In modern conditions, there is a need to change the orientation and criteria for evaluating the developed products manufactured by enterprises belonging to the branches of the agri-food sector of the Kharkiv region. The competitiveness of any product can only be determined as a result of comparison and, therefore, is a relative indicator. It is a product characteristic that reflects its difference from a competitor's in satisfying a competitive social need. Competitiveness is determined

by the totality of the properties of these products, which are part of their quality and are essential for the consumer, determining the consumer's costs for the purchase, consumption (operation), and disposal of products. General scheme of ensuring competitiveness (Fig. 3.10).

Table 3.1

System of Strategic Management Decisions to Increase the Competitiveness of Agri-Food Enterprises*

Name of the group of factors and indicators of competitiveness	Negative dynamics of the indicator	Organizational and economic solutions
1.Product Competitiveness	1.1 Increase in the price level 1.2 Decrease in sales volumes	Measures to reduce costs; explanatory and image advertising. Conducting comprehensive marketing experiments in order to identify the causes; increasing the effectiveness of the elements of the marketing mix.
2. Production and technological	2.1 Decline in production capacity 2.2 Decreased productivity 2.3 Degree of depreciation of fixed assets	Making capital investments; Control of labor discipline; motivation of production personnel; Making capital investments.
3. Organizational	3.1 Decrease in sales of products through its own distribution network 3.2 Decline in the reputation of the industry and the effectiveness of relations with the environment	Conducting marketing research on the attractiveness of purchasing goods in branded retail outlets; comprehensive measures to stimulate sales; motivation of sales staff. Conducting PR campaigns, image advertising.
4.Marketing	4.1 Decrease in the effectiveness of commodity policy 4.2 Decrease in the effectiveness of pricing policy	Expansion or improvement of the assortment; studying and increasing the effectiveness of the use of the trademark. Revision of pricing methods, flexible prices.
5. Financial and economic	5.1 Decrease in financial stability and investment attractiveness 5.3 Decrease in profitability	Selection of the optimal balance sheet structure; asset rehabilitation; Identification of non-production costs; increase in marketing activity.

** Designed by the author*

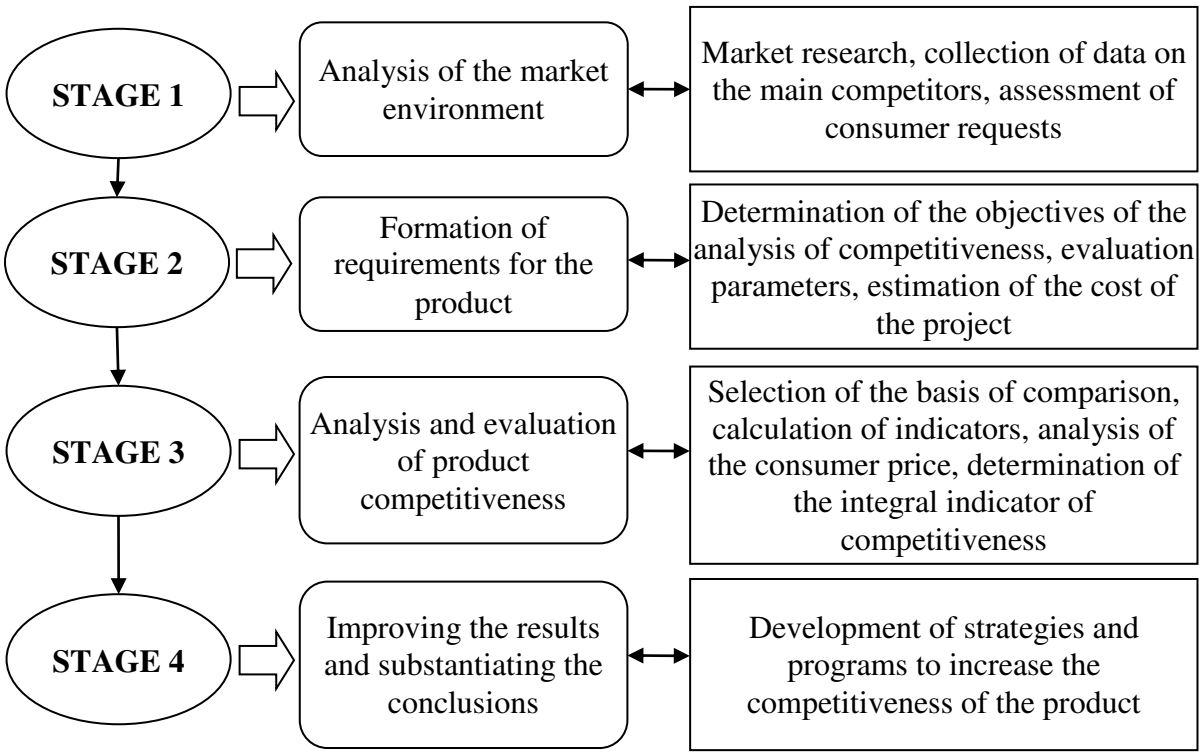


Fig. 3.10. Scheme for ensuring the competitiveness of goods of subjects of agri-food sectors

Source: author's development

Assessment of the competitiveness of goods (services) of enterprises belonging to the branches of the agri-food sector begins with the definition of the purpose of the study: if it is necessary to determine the position of this product in several similar ones, then it is enough to conduct their direct comparison according to the most critical parameters; If the purpose of the study is to assess the prospects for the sale of goods in a particular market, then the analysis should use information that includes information about products that will enter the market in the future, as well as information about changes in the standards and legislation in force in the country, the dynamics of consumer demand.

Regardless of the study's objectives, the basis for assessing competitiveness is the study of market conditions, which should be carried out continuously, both before the start of the development of new products and in the course of their implementation. The task is to identify the group of factors that affect the formation of demand in a particular market sector:

- changes in the requirements of regular customers of products are considered;

- the directions of development of similar developments are analyzed;

- areas of possible use of products are considered.

The circle of regular customers is analyzed.

The above involves "comprehensive market research". A special place in the market study is occupied by long-term forecasting of its development. Based on the study of the market and the requirements of buyers, products are selected for which the analysis will be carried out, or the requirements for the future product are formulated. Then, the nomenclature of parameters is determined. The analysis should use the same consumer criteria when choosing a product. For each of the groups of parameters, a comparison is made, which shows how close these parameters are to the corresponding need parameter.

Competitiveness analysis begins with an assessment of regulatory parameters. Suppose at least one does not correspond to the level prescribed by norms and standards. In that case, further assessment of the competitiveness of products could be more proficient, regardless of the result of comparison in other parameters. At the same time, exceeding norms, standards, and legislation cannot be considered an advantage of products since, from the point of view of the consumer, it is often useless and does not increase consumer value. Exceptions may be cases when the buyer is interested in some excess of existing norms and standards in the hope of their rigidity in the future.

The results of the competitiveness assessment are used to conclude it, as well as to choose ways to increase the competitiveness of products to solve market problems optimally. However, the high competitiveness of the product itself is only a prerequisite for selling this product on the market in given volumes. It is also necessary to consider the forms and methods of maintenance, advertising presence, trade, and political relations between countries, etc.

As a result of the assessment of the competitiveness of products, the following decisions can be made to increase competitiveness: change in the

composition, structure of the materials used (raw materials, semi-finished products), components or product design; changing the order of product design; changes in the technology of manufacturing products, test methods, quality control systems for manufacturing, storage, packaging, transportation, installation; changes in prices for products, prices for services, maintenance and repair, prices for spare parts; changing the procedure for selling products on the market; changes in the structure and size of investments in the development, production, and sale of products; changes in the structure and volume of cooperative supplies in the production of products and prices for components and the composition of selected suppliers; changing the incentive system for suppliers; changes in the structure of imports and types of imported products.

Improving the quality of goods is the most essential component of the strategy of enterprises belonging to the agri-food sector. The objects of forecasting are indicators of the quality of goods, which are inferior to similar indicators of competitors' products.

A promising direction for gaining competitive advantages in terms of non-price competition of products of agri-food enterprises is the priority of environmental friendliness, safety, and purity of agricultural raw materials and food products. The achievement of such advantages is ensured by eco-innovations, which in recent years have become one of the most potent tools of strategic competition for consumers. Today, a healthy lifestyle and safe products, socially responsible business, and consumer behavior are not only fashion trends. They are the global goal of sustainable development of society, which is the basis for achieving other goals and objectives. Eco-innovations are gradually becoming a necessary element of managing competitiveness, production, and marketing processes, the key to the quality and success of goods on the market. Environmental innovations can solve environmental problems effectively, contribute to the improvement of the sustainability of companies, which improves their investment ratings, and ensure high quality of food products. Eco-innovations are necessary to solve the problem of increasing the share of added value in the

structure of products of the domestic agri-food sector. They create economic and marketing advantages and reduce the burden on the natural and biological environment due to resource savings and reduction of harmful emissions and waste.

To manage the competitiveness of business entities in the agro-industrial sector, three types of eco-innovations may be the highest priority (Fig. 3.11).

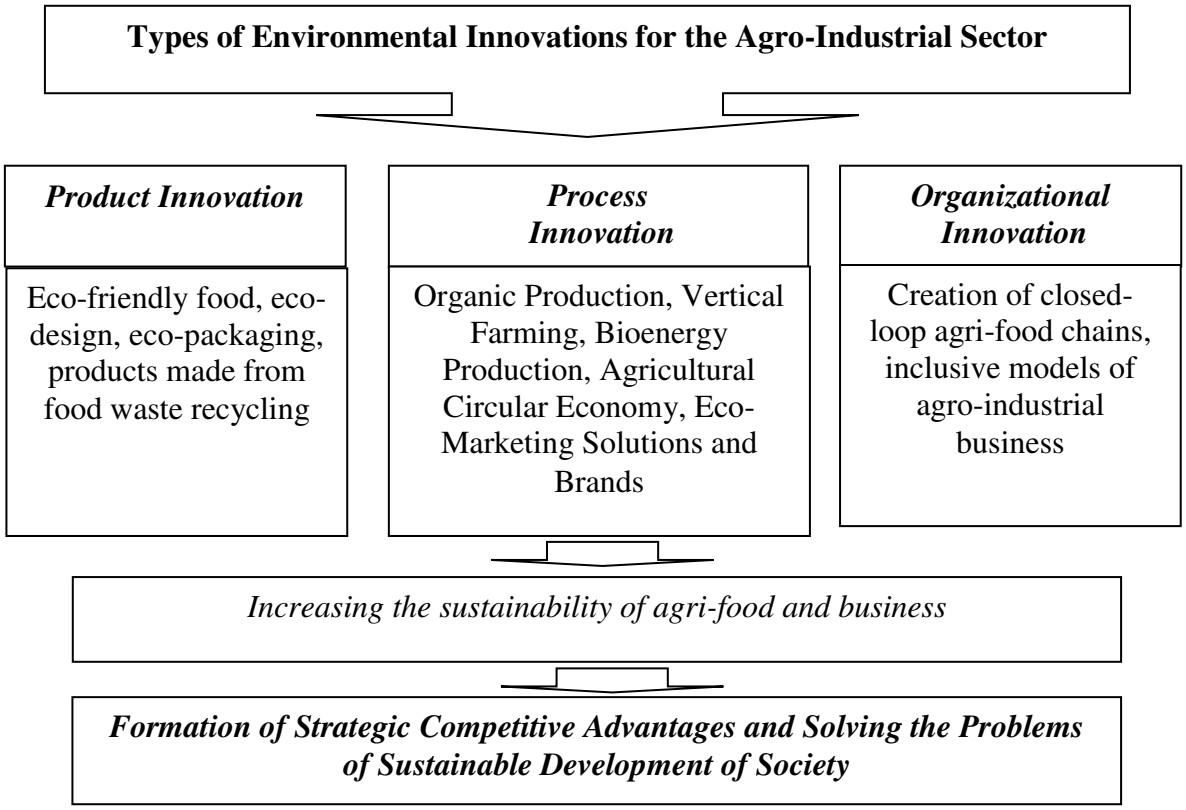


Fig. 3.11. Recommended types of eco-innovations for agri-food enterprises

Source: author's development

The introduction of eco-innovations into the practice of economic activity by one of the branches of the agri-food complex creates favorable and motivating conditions for the transition to an eco-innovative type of development of all participants in the sphere or agri-food value chains. Final product eco-innovations require preliminary methods and methods of ecological production, which forms new requirements for the main business processes, quality management systems, and management systems. From the managerial level, environmental innovation is structurally supported by organizational resources, technologies, processes,

relationships, and marketing decisions.

The economic efficiency of eco-innovations, in addition to traditional financial performance indicators, can be considered a paradigm shift in thinking and management due to the implementation of radically new solutions and models of production and consumption.

Significant is the role of organizational eco-innovations, which involve the search and implementation of new forms, methods, and business models of management in the practice of economic relations of participants in the agri-food sector. The priority form of organization of joint relations between the participants of APV is the creation of a single technologically, industrially, and market-related agri-food (agri-food) value chain. The organization of this form of business model of interaction between different producers (agricultural, food industry enterprises, marketing companies, etc.) forms a decisive prerequisite for increasing the inclusiveness of the agri-food business. The economic basis of such chains is the principles of equality, justice, and honest partnership, considering the possibilities of realizing the interests of all association members. Inclusive agri-food value chains allow for maximizing production volumes due to scale and attracting additional participants, creating, and satisfying common values, and realizing business interests along with the additional effect of a socio-environmental nature for the area and territorial communities.

Organizational and process eco-innovations in creating new sustainable business models of agri-food production are also determined by a powerful productivity potential. Traditionally, linear models of production organization in the Ukrainian economy, in the agri-food sector, have led to a significant depletion of the resource component, the lack of effective ways to manage waste, a high level of burden on the environment, and additional business costs associated with a constant upward trend in prices for material and technical resources. The solution to this problem is possible by creating closed-loop agri-food production business models. Agri-food circular business models (which can be organized as a closed agri-food chain) result from implementing organizational eco-innovations.

The agri-food sector of Ukraine's economy is one of the highest priorities regarding investment and performance indicators. Further development and gaining competitive advantages in the market of agricultural raw materials and food products today requires systematic eco-innovations from management, which are based on a systematic rethinking of the logic of creating a new sustainable value and models compatible with the circular principles of its creation. Transformational Transition to a Circular Economy It requires systemic and sometimes radical changes in production and management models. At the same time, eco-innovations will have a decisive impact on developing new technologies, processes, products, and business models. According to European experts, green innovations in the circular economy have the potential to increase resource productivity by 3% by 2030, with a total effect of €1.8 trillion in three main sectors: mobility, food, and cost savings [187]. Today, European practice considers the priorities of the circular economy, the basis of which are environmental innovations, to be a vital tool for achieving strategic competitive advantages. One of the most attractive areas for implementing circular business models is the agro-food sector. The main tools of environmental innovations related to management decisions of a circular nature are the reuse of resources, cost saving (optimization), reducing the cost of production and increasing the level of its price competitiveness, eco-design, and active influence on the formation and satisfaction of socially responsible consumer demand of the population for environmentally friendly, safe, and high-quality food products.

Environmental innovations (product, process, organizational) are one of the most active ways for agri-food enterprises to demonstrate the signs and methods of sustainable development, which is gradually emerging as a critical criterion for attracting investment and access to financial resources, grants, private funds, and forms of state support. Today, eco-innovations, placed in the center of the production and marketing management system, are an indispensable element of the corporate culture of business, a lever to improve the company's business reputation in the market and gain competitive advantages based on using image capital.

Eco-innovations are characterized by a powerful potential for attracting additional financial resources, in terms of methods and forms of international grant support. Already today, world organizations (UNEP, UNEP, EU Commission) provide financial support to small and medium-sized businesses that implement sustainable development models in management practice based on the use of new environmental or modification of existing environmental solutions that lead to an increase in productivity and competitiveness.

Eco-innovative companies in the agri-food sector have opportunities to create value for business, the environment, and society, which is also a long-term driver of competitiveness in the market. As a result, businesses become more flexible, able to respond quickly to the volatility of market trends, and offer consumers new solutions ahead of competitors. Eco-innovations have a long-term nature of actions and form a strategic potential for competitiveness in contrast to traditional innovations that provide profit in the short term. They are the basis for achieving long-term competitive advantages, sustainable strategic development, and achieving goals with bonuses for both business and society (Fig. 3.12).

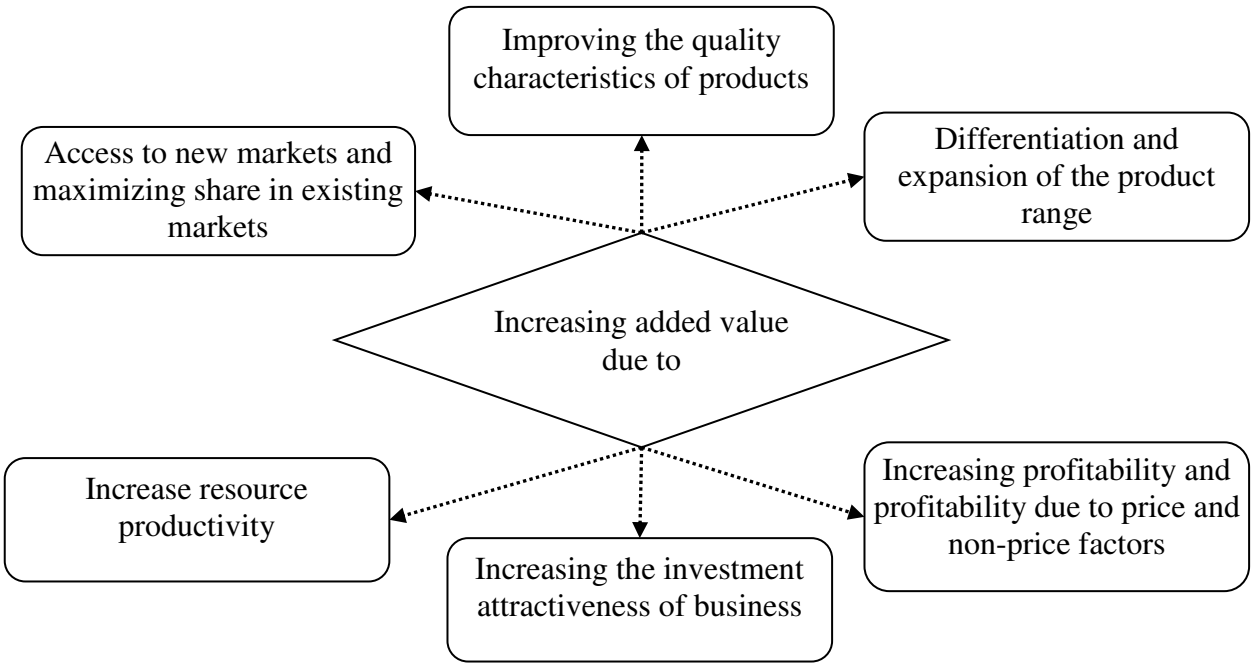


Fig. 3.12. Strategic competitive advantages, create eco-innovations

Source: author's development

At the same time, obtaining such competitive advantages for agri-food enterprises is a difficult task that requires significant investments, a period, professionalism of strategic management, and a high level of corporate culture. The success of implementing environmental innovations is also primarily determined by the interaction and economic ties between enterprises, the degree of integration, and the presence of a common plane of values and business interests. Eco-innovations in agri-food production require business management and staff to have a deep perception of sustainable values and an understanding of future bonuses, which are manifested in both economic and socio-environmental.

Dimension. Solving such complex tasks requires intensifying cooperation and partnership between all participants in the agri-food business, deepening the degree of integration of interconnected partnerships based on inclusiveness and respect. These requirements form the need to create new forms and models of agri-food business organizations, one of the most promising of which, we see, is closed agri-food chains that unite agricultural producers, food industry enterprises, intermediary structures, marketing companies and other participants, united by common goals of ensuring eco-oriented long-term competitiveness on the principles and values of sustainable development.

3.3. State support for the development of competitive production

Kharkiv region occupies an essential place in the economy of agro-food production in Ukraine. It has a strong potential for ensuring food security in the Eastern region of the country. At the same time, the riskiness of agri-food production objectively requires supplementing the mechanism of action of market factors in the market of agricultural raw materials and food products with effective levers of state support. From the point of view of providing state aid, the agri-food sector is traditional and a priority for all developed countries of the world without exception. The Global Sustainable Development Goals have significantly actualized the importance of the agri-food sector for the dignified existence and

well-being of present and future generations and the search for new forms and ways of state assistance to producers. Large-scale amounts of state support for farming and food companies in the EU countries from the presence of significant gaps between the assistance received by Ukrainian agri-food businesses and the business of European countries, and, accordingly, form certain risks and threats to the competitiveness of Ukrainian products in the EU markets. This requires further substantiation of systemic, strategic measures aimed at finding ways, methods, and mechanisms of state aid to the domestic agri-food sector to ensure its competitive solid positions and advantages in comparison with European business.

Of all the branches of the agri-food sector of the Kharkiv region, agriculture requires the most radical and effective state regulation and support for competitive development. This is because, firstly, this industry is vital in any society and is considered a priority in substantiating the prospects for the socio-economic development of the country. Secondly, agricultural production, due to the existence of production problems, can only develop effectively with the stabilizing influence of the state.

We are talking about the functioning of the industry in the zone of market farming, with frequent negative agro-climatic phenomena and processes. This requires the creation of insurance and other stabilizing funds. Agro-industrial production accounts for 25% of the means of production, although it produces about 35% of the gross domestic product. Domestic food turnover accounts for up to 70% of the consumer market.

After Ukraine acceded to the World Trade Organization, the requirements for the quality of agricultural products, which can only be produced by competitive economic entities, have been tightened. They will be able to take advantage of international cooperation in investment, lending, certification, insurance, and scientific and technical support for the production and sale of products. However, economic entities will only be able to achieve an appropriate level of competitiveness with government intervention.

Currently, in Ukraine, including in the Kharkiv region, state support is regulated by the Laws of Ukraine "On State Support of Agriculture of Ukraine", the Strategy for the Development of Exports of Agricultural Products, Food and Processing Industry of Ukraine for the period up to 2026, the Law of Ukraine "On the Basic Principles of State Agrarian Policy and State Policy of Rural Development", the Concept of the State Target Program for the Development of the Agrarian Sector of the Economy for the period up to 2022, Decree of the Cabinet of Ministers of Ukraine "On Approval of the Action Plan for the Implementation of the Concept of Rural Development", the Strategy for the Development of the Agricultural Sector until 2030, the Food Security Strategy of Ukraine for the period up to 2030, the Strategy for Sustainable Development of Ukraine until 2030 and other national and sectoral regulations.

State support for agri-food production is a priority strategic task of rebuilding the national economy of Ukraine, ensuring its food security, and achieving the goals and objectives of sustainable development.

In recent years, Ukraine as a whole has developed a mechanism for providing state aid to agri-food business entities, which includes state financial support (agricultural insurance, lending, taxation), providing business opportunities to participate in grant projects, support for farming and cooperation, support for rural development and critical infrastructure, assistance in international cooperation in the fields of agribusiness, regulatory and consulting support for business entities of all branches of the agri-food complex.

The practice of domestic state aid to industries structurally and technologically related to food production, which has been in effect for many years, is provided in three primary forms (Fig. 3.13).

Targeted program financing is carried out based on the Law of Ukraine "On the State Budget of Ukraine" [56], according to which in 2021, UAH 19.3 billion was allocated for direct support of agriculture. UAH. The main programs of state financial support were reducing the cost of credit resources and the development of farming. Support for the livestock industry, as well as storage and processing of

livestock products; partial compensation of the cost of agricultural machinery of Ukrainian production is represented in Table 3.2.

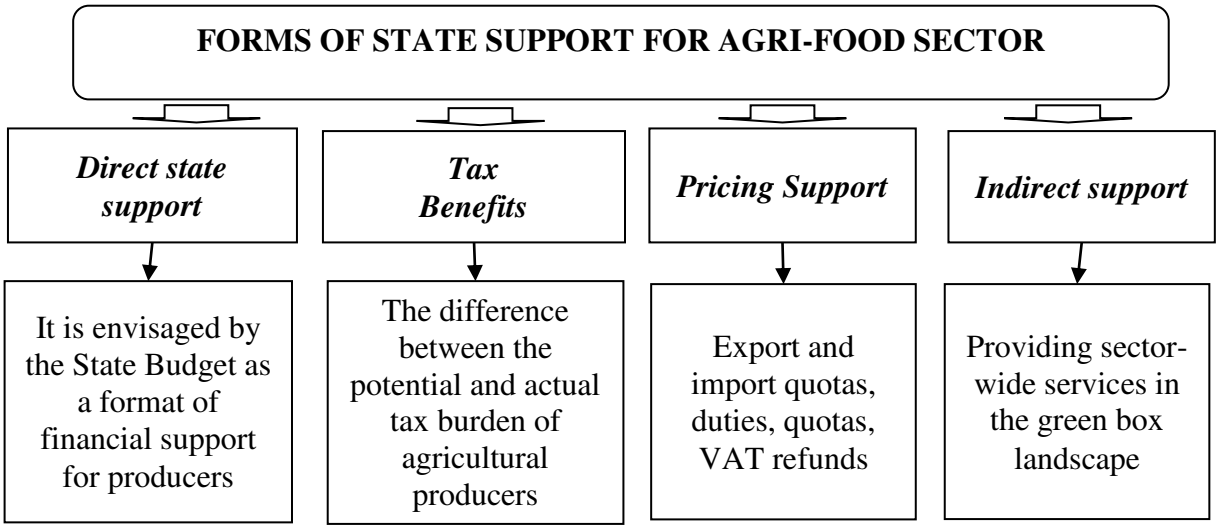


Fig. 3.13. Current forms of state support for agro-industrial production in Ukraine

Source: compiled by the author at [117].

Table 3.3

Amount of state financial support for agri-food enterprises of Ukraine, UAH million

State support programs	2018	2019	2020	2021
Financial support of APV enterprises through cheaper credit resources	266,0	127,6	1048,7	1200,0
Supporting the development of farming	200,0	800,0	134,0	200,0
State support for the development of hop growing, young orchards, vineyards	400,0	400,0	400,0	450,0
Providing loans to farms	-	200,0	200,0	200,0
State support for the livestock industry, storage and Processing of agricultural crops Products	2401,0	3500,0	1046,9	1150,0
Financial support for agriculture Manufacturers	955,0	881,8	1000,0	999,3
Including compensation of part of the cost of agriculture. machinery and equipment	955,0	681,8	1000,0	999,3

Source: compiled by the author according to [117]

According to the monitoring data on the direction of the State Budget funds, the central part of the state financial support for agri-food enterprises was provided through direct subsidies in the form of cheaper loans. An essential item in the structure of state aid is also an item that includes expenditures on assistance to the

development of the livestock industry and the processing of livestock products. This direction includes such measures for the use of budget funds as

- reimbursement of the cost of livestock facilities,
- compensation for the cost of such objects purchased (built) at the expense of credit resources,
- special budget subsidies for the increase in the number of specific categories of farm animals,
- partial reimbursement of the cost of construction of elevators.

Such financing of agri-food sectors could be much better. This is due to the dispersion of public funds across various programs and individual measures, the lack of equal economic conditions in the market, the imperfection of support mechanisms, the irrational use of budget funds, the lack of a long-term strategy and choice of development priorities, and the lack of funds to the direct producer.

These factors, in turn, affect the innovative development of agri-food sectors since producers, minimal and medium-sized ones, are not able to contribute to the growth of the technical level of production, introduce resource-saving and environmentally friendly technologies, and introduce a system of consulting with both domestic and foreign partners. In addition to proper financing, the system of state support for agri-food sectors needs to solve problems related to insurance, credit and price activities, and state protectionism in food commodity markets.

The lack of flexible risk insurance systems for investors, specialized insurance companies focused on protecting small businesses with foreign investments with minimal tariffs and tax benefits, sufficient insurance protection of entrepreneurs against various risks, guarantee and collateral funds continues to repel investors. Moreover, in Ukraine, agricultural insurance occupies an insignificant place in the general insurance system since it is underdeveloped, risky for insurers, and quite expensive for business entities. In addition, the distrust of potential insurers in the insurance company, the insufficient level of qualification of insurance company employees, the imperfection of insurance legislation, and

the high cost of insurance premiums for the insured cause many reasons for the insufficient formation of insurance in the agri-food sector.

Given the limited financial potential of most companies and producers in the agri-food sector, one of the essential sources of attracting capital to the sector is borrowed funds, in particular, in the form of bank lending. Reducing the cost of credit resources is the main item of expenditure of the State Budget to support agri-food production. At the same time, the level of inclusiveness of producers' access to this program should be increased in the future, And the cost of credit resources should be affordable for all participants in the agri-food business without exception. According to the data of the Ministry of Agrarian Policy and Food of Ukraine, the number of entities that applied for compensation for the cost of credit resources and used this mechanism in 2021 amounted to 4.4 thousand borrowers for a total of UAH 94.4 billion. By type of lending, the maximum share of borrowed funds was short-term loans – 41.3%, and the share of medium-term and long-term loans was 36.8% and 21.9%, respectively [145]. At the same time, the Kharkiv region was among the leaders in the ranking of regions of the country in terms of activity and cost of attracted and reimbursed credit resources: Kyiv region - UAH 6.5 billion, Poltava region - UAH 4.5 billion. UAH, Kharkiv region - 4.2 billion. UAH.

As studies have shown, both credit activities of business entities in the agri-food sector need some help. For example, it is more difficult for agricultural business entities to gain access to credit resources compared to economic entities in other industries for the following reasons: high-interest rates, low profitability, and unstable cash flow in agriculture, legal unregulation of land ownership issues, market opacity, lack of stabilization funds, external or international financing and risk insurance, unified banking policy, inadequate management among creditors.

Due to such factors, the share of loans from commercial banks in the total lending structure was low. Because of this, in the credit system, it is necessary to establish differentiated terms for issuing short-term loans to business entities in the agri-food sector, to increase the interest of commercial banks in investing credit

resources in production through preferential taxation, to create a unique credit fund to cover the difference between preferential and current interest rates on loans provided on preferential terms to commodity producers in the agri-food sector.

Significant in comparison with the average indicators in the agri-food sector of the country was also the volume of state financial assistance to enterprises of the Kharkiv region under the program of compensation for part of the cost of purchased complex agricultural machinery of domestic production. In 2021, manufacturers of the agro-food sector of the region purchased 927 equipment units with a total compensation value of UAH 57.5 million. Thus, the Kharkiv region took the fifth position in the national ranking after Kherson, Poltava, Zaporizhzhia, and Kirovohrad regions (Fig. 3.14).

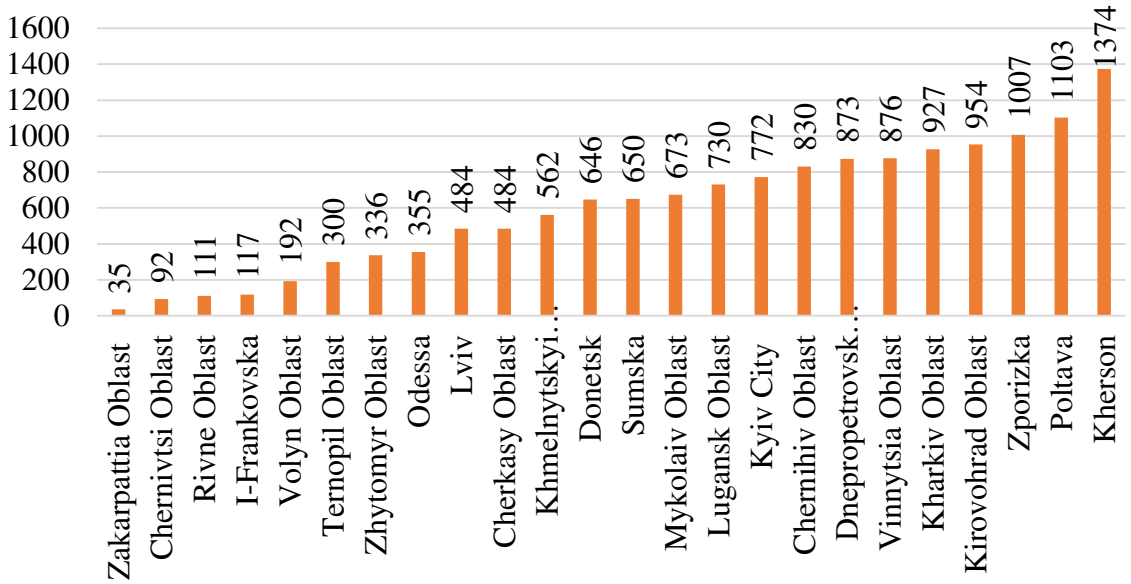


Fig. 3.14. Rating of Kharkiv region in the program by the amount of partial compensation for the cost of agricultural technology and equipment

Source: compiled by the author according to the data of the Ministry of Agrarian Policy and Food of Ukraine [117]

Among the leaders of the national rating, Kharkiv region also appeared in the direction of state support "Development of horticulture, viticulture and hop growing" (purchase of machinery and equipment of foreign origin with a part of

the state financial compensation of the cost of no more than 30%) (Fig. 3.15).

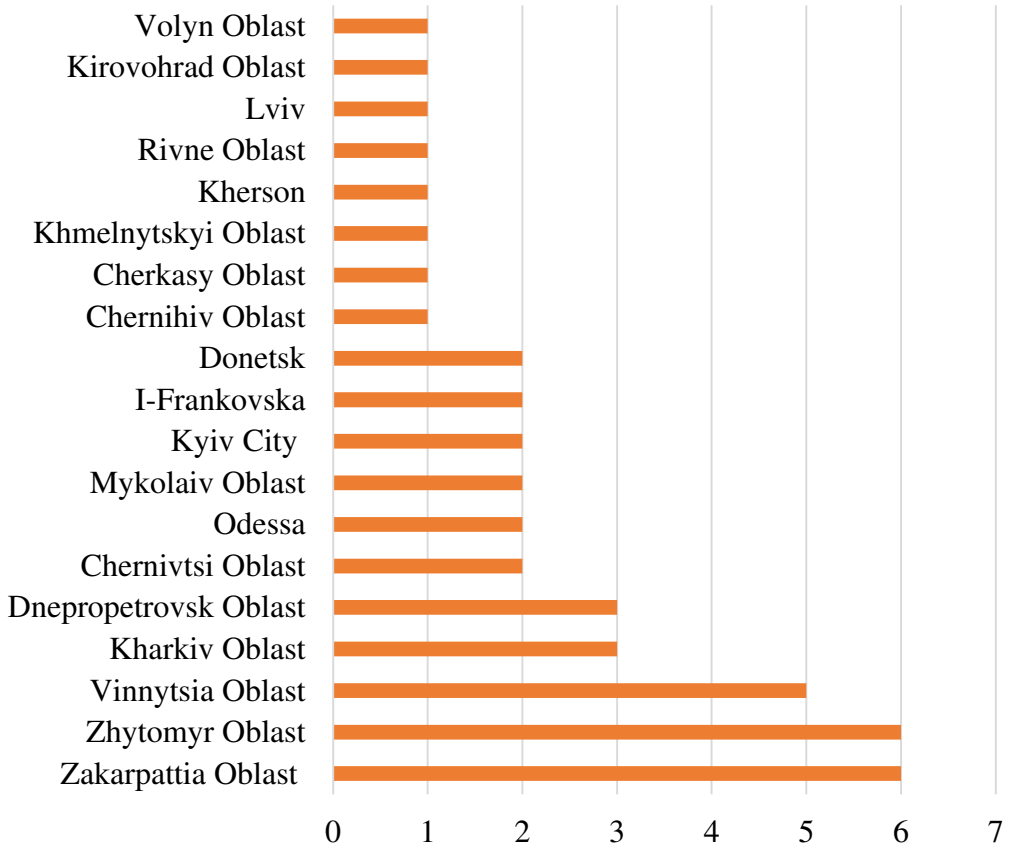


Fig. 3.15. Rating of Kharkiv region in the program by the amount of state support for the program "Development of horticulture, viticulture and hop growing"

Source: compiled by the author based on the data of the Ministry of Agrarian Policy and Food of Ukraine [117]

In addition, the amount of state financial support for agri-food producers in the Kharkiv region under farm development programs was determined significantly compared to other regions. Thus, the amount of direct state subsidies to farmers in the region amounted to UAH 1.32 million (9th place in the regional rating of the country, UAH 0.49 million in subsidies for keeping cows, UAH 5.0 million payments for reimbursement of the cost of purchased breeding animals, UAH 9.3 million subsidies for existing bee colonies, UAH 24.6 million — compensation for the cost of livestock facilities [117].

According to the Law of Ukraine "On State Support of Agriculture of Ukraine" [52], the state regulates wholesale prices of certain types of agricultural

products, setting minimum and maximum purchase prices, as well as applying other measures determined by this Law, subject to the rules of fair competition. Under the current mechanism of state financial support, the main objects of state price regulation were wheat, rye, barley, corn, sugar, flour, milk powder, buckwheat, butter, peas, oats, and millet. However, the established restrictions continue the growth of prices in spontaneous markets, which indicates inadequate regulation and control of pricing.

The state's assistance is needed in regulating specific markets for agricultural products, which will help increase the efficiency of their functioning. First, it is necessary to develop a Concept of Competitive Development of Agriculture in the country and regions at the state level. The Concept should be based on the substantiation of mechanisms for achieving high-quality finished products and raw materials, systems for their control and compliance, and restructuring of economic relations in rural areas, namely, relations to means production, consumption, and social development.

To date, the Concept of Agricultural Development for the period up to 2030 has been substantiated in Ukraine, which contains specific provisions that can contribute to increasing the competitiveness of agricultural products. However, to a greater extent, they aim to achieve the targets for sustainable development of the agricultural sector. The Concept of Competitive Agro-Industrial Production, in our opinion, should be based on the principles of sustainability, inclusiveness that concerns all participants in agri-food chains, and specific mechanisms for increasing the level of competitiveness of their products based on sustainable development of all sectors of the agri-food sector.

The way out of the situation is the formation of a competitive industry in the world dimension under the condition of active state intervention in the course of monetary relations and state support in stimulating the development of this vital industry for the country, state assistance in the creation on a scientifically grounded basis and location on a zonal principle of large high-tech enterprises of various forms of ownership and management for the production of livestock and crop

production. Of great importance is the revival of the agro-resource potential and the introduction of the economic rules that operate in the EU markets in the agricultural market of Ukraine.

Based on state support and protectionism, a market environment should be created in Ukraine that would ensure the financial self-sufficiency of agricultural producers by attracting the necessary amounts of affordable credit resources to carry out production activities on a profitable basis. According to the Law of Ukraine "On State Support of Agriculture of Ukraine" [52], the state regulates wholesale prices of certain types of agricultural products, setting minimum and maximum purchase prices, as well as applying other measures determined by this Law, subject to the rules of fair competition.

In recent years, the objects of state price regulation have been wheat, rye, barley, corn, sugar, flour, milk powder, buckwheat, butter, peas, oats, and millet. However, the established restrictions continue the growth of prices in the markets, which indicates inadequate regulation and control of pricing. Technical support of agricultural facilities has a significant impact on yields, financial results, and competitiveness of the industry.

Statistical data indicate the need for more technological provision of agricultural sectors of the Kharkiv region with agricultural machinery, which does not reach the normative indicators. It accounts for 76.8% of the technological demand for tractors and 82.3% of combined harvesters. Technological support lacks 4585 units. Tractors and 525 units. Combine harvesters. Therefore, it is essential to increase their acquisition through various mechanisms. The volume of purchase of basic agricultural machinery in the Kharkiv region is shown in Table. 3.4.

The volume of capital investments of business entities in the agri-food sector has demonstrated a positive trend in recent years. For 2010-2021, the share of capital investments in agriculture increased from 6.0% to 10.1% (up to UAH 67993 million), and the share of capital investments in food industry enterprises amounted to 4.2% (UAH 28166 million). Similar are the trends in the level of

provision of agri-food enterprises with fixed assets – the share of the agricultural sector is 5.0%, food industry enterprises – 3.0% [141]. This indicates significant positive structural changes in material and technical support, which forms favorable prerequisites for increasing the industry's competitiveness.

Table 3.4

Volumes of purchase of basic agricultural machinery in Kharkiv region in 2000 – 2019, units*

Vehicle Name	Years									
	2000	2005	2010	2013	2014	2015	2016	2017	2018	2019
Tractors	17200	11600	8800	8900	8600	8500	8800	8600	8045	7888
Combine harvesters	2909	2210	1815	1884	1806	1751	1858	1814	1740	1738
Milking machines	2450	1257	734	771	731	758	743	740	373	392

** Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]*

Even though during 2010-2021, there was a positive trend in increasing the volume of equipment purchases, they generally needed more. The volume of purchase of tractors annually is 2.0-4.1% of the available, and combined harvesters - 2.1-3.1%. With such volumes of equipment purchases, it needs to be updated. Therefore, one of the main tasks of state support is the purchase of basic agricultural machinery following technological needs. This is especially true for innovative equipment of 4-5 technological modes, which is used in advanced Western countries.

Due to objective and subjective reasons, today, the machine and tractor fleet in the agricultural sectors of the region, in general, consists of 68-71% of equipment that has a wear of more than 70%. The situation is aggravated by the fact that agricultural machinery of domestic production with a lower cost has a lower technical level, productivity, reliability, quality, and an insufficient assortment. However, even under these conditions, the volume of its purchases should be increased by 3.0-3.5 times.

It is necessary to improve its technical level, reliability, and quality to ensure the sale of agricultural machinery produced in the Kharkiv region. For this purpose, there is a significant economic and intellectual potential that can create a robust material and technical base that will meet the requirements of agricultural technology, the structure and volume of agro-industrial production, the requirements of energy saving, and environmental safety. The material and technical base should be completed at the expense of high-level equipment, which will ensure the production of competitive products using energy-saving technologies with specified quality indicators and nomenclature.

One of the promising areas of further technical and technological support for agri-food enterprises is financial leasing. The Government of the country has expanded the scope of the current practice of state support for the agri-food sector through the adoption of the program "Affordable Loans and Affordable Leasing 5-7-9%. In addition, in 2021, the regulatory framework for leasing operations was improved by adopting the Law "On Financial Leasing" by the Verkhovna Rada of Ukraine. This intensified the activities of leasing companies in Ukraine, the number of which, according to the NBU, as of the end of 2021, was 935 units. The total cost of financial leasing services provided amounted to UAH 185.6 million. (the number of contracts for financial leasing services was 17475 units). The most active cooperation with agri-food enterprises in concluding leasing agreements was JSC "Upragroleasing", OTP Leasing, "And alfa-Leasing Ukraine.

In order to strengthen the competitiveness of economic objects in the agricultural sector, it is necessary to carry out a structural restructuring of the industry through the creation of industrial and financial associations, which will allow to concentrate the management of property and capital, increase the specialization of integrated economic objects and strengthen their competitiveness; create and expand the range of products, provide maintenance of technical facilities; contribute to the formation and development of domestic and development of the foreign market of agricultural machinery.

The state should comprehensively assist business entities in the purchase of technical means in order to reduce the cost of manual labor for the production of agricultural products to update the machine and tractor fleet mainly at the expense of domestically produced equipment and maintain it in working order with timely maintenance and repair and restoration work; to develop training and advanced training programs for engineering and technical personnel and machine operators of a comprehensive profile.

There are also problems of state support for developing industries in the Kharkiv region, which negatively affects their competitiveness. Almost 40% of fixed assets are concentrated in the industrial complex. Most of the facilities were built in the 50s and 60s, so the level of depreciation of fixed assets is quite significant and amounts to 50-60%.

In addition, there are problems caused by the discrepancy between the production capacities of industrial facilities and the capacity of the domestic market, the low level of processing and high resource consumption of production, and, as a result, the limited solvency of domestic market entities, insufficient capacity of the financial and credit system, imperfect regulatory and legal support.

Refusal of potential investors to invest in production, non-fulfillment of contractual obligations by consumers of products, decrease in production volumes, reduction in the number of employees engaged in this production, deterioration of the financial condition of economic facilities, late payment of wages, decrease in revenues to the budgets of all levels – these are the factors that led to a partial or complete shutdown of industrial production for a certain period.

On the part of the state, it is necessary to promote the creation of competitive industrial sectors and activities capable of solving the main tasks of social and economic development of the region in the context of integration. After all, the Kharkiv region has several advantages and opportunities, the full use of which can ensure sustainable economic development and a significant increase in the level and quality of life of the population, including based on a balanced state budget in terms of revenues and expenditures.

The main priorities of the state are to ensure appropriate investment conditions for the development and increase of production volumes in the industrial and agricultural sectors, increasing the level of their innovative activity. This will contribute to the creation of new jobs, an increase in real wages, and an increase in the standard of living of the population. The development of the main sectors of the industry should coincide with current activities, ensuring the proper financial and economic condition of economic facilities, optimizing production capacities, updating equipment, improving personnel, and introducing effective management.

On the part of the state, it is necessary to ensure the stable functioning and development of the industry through effective management and the use of property rights, taking into account antimonopoly regulation and the development of competition; to introduce new technologies with improved technical and economic indicators, reduced energy and resource intensity of production, integrated automation of production processes, a significant increase in labor productivity, and social security and protection of employees.

It should be noted that the level of social orientation of industry will increase due to the redistribution of the balance of costs of industrial facilities in favor of employees; the growth rate of real wages in the industry will be about 12-15%, which will correspond to the European choice of Ukraine. Due to the gradual increase in the volume of industrial production, it is expected to increase the average number of full-time employees to 38000 people, which is 20% more than in 2021.

Particular attention should be paid to the development of the processing industry. The food and processing industry is one of the leading strategic and most important branches of agro-industrial production in the Kharkiv region. The efficiency of related industries and food security, the development of domestic and foreign consumer markets, and the standard of living of the region's population depend on the level of its development and stability of functioning. Today, the food industry is one of the top five industries in terms of filling the state budget,

ranks second in terms of production in the structure of industrial production of the region, and can meet domestic needs for food products, which account for more than 60% of personal consumption of material goods of the population.

The food and processing industry is an organizer and integrator of food production, the driving force of the entire agro-industrial complex and contributes to the development and placement of components of other industries as a consumer of their products. The food industry and processing of agricultural products includes 90 extensive and more than 300 medium and small economic facilities that produce a wide range of food products. The food market of the Kharkiv region is filled with the appropriate range of products.

Most of the leading business facilities in the food industry operate stably, increase the pace of production, expand the range, and increase the competitiveness of products. However, consumer demand has become more demanding on the quality of food products and the conditions of their storage and sale. Therefore, the main task of the state is to introduce a quality management system certified according to international standards for the food industry.

In recent years, the development of the food industry in the Kharkiv region has been characterized by a general decrease in the technological level of production, wear, and tear of equipment, mechanisms, and tools, attenuation of investment and innovation processes, displacement of domestic food products from the domestic and foreign markets of food products, a decrease in the volume of budget revenues and foreign exchange earnings in the region from export operations of the industry, etc.

Thus, only 7.5% of livestock and poultry from all categories of farms were received for industrial processing; the rest were sold without pre-processing in markets, commercial structures, or processed in workshops that do not provide the integrated use of raw materials and high-quality products. Therefore, only 10% of the capacities of meat processing facilities are used, which negatively affects the cost and prices. As a result of the narrowing of sales markets, production capacities in other sectors of the food industry need to be more satisfactorily used. Part of the

capacities of individual business facilities must be mothballed, and some of them have stopped production processes altogether.

In terms of the state of the production and technical base, structure, technical and economic indicators, and infrastructure development, the food industry of the Kharkiv region lags far behind more economically developed areas, especially in terms of complex processing of raw materials, mechanization, and automation of production processes, as well as packaging and packaging of products. The operation of industry facilities is negatively affected by importing products with preservatives, which extends their shelf life. At the same time, high-quality domestic products with shorter consumption periods are being squeezed out of the retail network.

In order to promote the development of the food industry, it is expedient for the state to support the restoration of the functioning of sizeable modern food industry facilities in the meat, dairy, and fruit and vegetable canning industries. Only their production capacities can meet the demand and thus stimulate the development of livestock and horticulture on a large scale. These processes take place at the level of domestic corporate structures – agricultural holdings or joint ventures. It is in them that innovations and new technologies are used, which have an acceptable payback period to attract investment.

World and domestic experience show that combining the efforts of agricultural and processing facilities is the most effective way to overcome the crisis, increase the competitiveness of agri-food sectors, and implement tasks in agri-food production. The volume of processing of agricultural raw materials into ready-to-eat food products in the region and Ukraine is at most 30%.

The main reasons hindering the development of food and processing industries in the region are: economic and financial problems of development of food and processing industry; lack of a systematic and holistic approach to the implementation of state regulatory policy; lack of real collateral and high interest rates for obtaining loans from banks; weak material and technical base of a significant number of medium-sized economic objects; low level of introduction of

innovative products and attraction of investments; seasonality of production, which does not always allow business entities to load their production capacities for the entire calendar year and to sell products during the year; production and market risks, due to instability and economic recession, underdeveloped and ineffective insurance system, which cannot protect the manufacturer from losses; a decrease in demand in the food market due to a deterioration in the purchasing power of the population and a sharp increase in the supply of imported products; lack of creation of reliable environmental protection systems for the production of food industry products; insufficient introduction of highly efficient, modern, new technologies for processing agricultural raw materials.

It is necessary to develop the food production industry at the state level based on effective technologies for the complex processing of agricultural raw materials to change the situation. Only then will the consumer food market not depend on fluctuations in production volumes. The development of the food industry should become one of the priority areas of socio-economic development of the Kharkiv region. It is necessary to orient them to obtain the result of the entire agro-industrial production, which will provide a significant increase in its efficiency, as well as become a reliable source of replenishment of local, regional, and state budgets and significant foreign exchange earnings. Indicators of production of certain types of food products, which characterize the state and prospects for the development of the food and processing industry, are presented in Table. 3.5.

Analytical data indicate a high potential to produce certain types of food and beverages, which characterize the state and prospects of development of the food and processing industry of the Kharkiv region, which, in turn, affects the competitiveness of the industry.

A positive example of improving the level of information and analytical support for agri-food producers is the functioning of the digital National Food Security Platform, the pilot project implemented in the Kharkiv region. Agri-food

structures can place ads and conclude contracts under transparent mechanisms based on inclusive access for both producers and buyers. Platform in addition to agricultural producers and food enterprises The industry also unites logistics companies, retail chains, international organizations, and capital donor organizations, and its functionality is the initial stage in creating an agri-food value chain within the region. Such organizational tools are necessary to increase the competitiveness of agricultural enterprises. They should be constantly improved, considering changes in the factors of the business environment of the market.

Table 3.5

Volumes of consumption of certain types of food products and beverages, which characterize the state and prospects of development of the food and processing industry of the Kharkiv region *

Types of food	Years							
	2000	2005	2010	2015	2018	2019	2020	2021
Meat, thousand tons	99,2	114,7	152,1	143,9	139,9	138,7	141,7	136,0
Milk, thousand tons	498,	617,6	598,7	622,1	560,3	543,7	536,1	521,0
Eggs, mln units	451,4	620,2	759,7	758,0	735,8	741,4	719,7	715,5
Bakery products, thousand tons t	418,8	360,3	300,9	260,0	252,7	241,1	243,2	223,7
Oil, thousand tons	27,8	36,1	36,4	30,2	28,4	29,0	29,7	31,4

** Calculated according to the data of the Main Department of Statistics in Kharkiv region [24]*

The efficiency of managing the competitiveness of economic entities in the agri-food sector requires state support coordination of the activities of central and local executive authorities, as well as ensuring inter-sectoral and inter-regional links of technologically related industries and industries in the form of clusters, which will make it possible to increase the efficiency of managing the competitiveness of agri-food sectors. Realizing the potential for the development of the food industry is possible based on an innovative scenario of its development, which will solve not only the existing problems but also ensure the formation of long-term competitive advantages for the industry of the Kharkiv region.

At the state level, the priority directions for the development of innovations in the food and processing industry of the region should be:

- improvement of biotechnological processes of processing of agricultural raw materials, taking into account the production of new types of products for general and special purposes with the use of enzyme preparations and biologically active substances;
- improvement of the food storage system along the entire path of the movement of raw materials and finished products from the field or farm to the consumer, which ensures maximum preservation of quality and reduction of losses of biological value of products;
- the use of by-products of the food industry to produce high-grade food and high-quality feed for livestock.

It is essential to create a technology for the production of qualitatively new food products with a directionally changed chemical composition following the needs of the human body, ensuring maximum preservation of nutritional value and quality of products through the use of modern technologies and equipment that exclude the possibility of bacterial, chemical and physical contamination; improvement of the regulatory and methodological framework, state supervision over the quality and safety of food products and agri-food raw materials in order to control the conditions of production, purchase, supply, transportation, storage and sale of products, creation of a system for the production of food products of guaranteed quality.

It is necessary to ensure the integration of science and production to solve the existing problems of competitive development of the food and processing industry, the unification of industrial, banking, and trade capital, which will make it possible to establish new robust integrated structures capable of creating high-tech, competitive goods and providing relevant services; to create conditions for attracting domestic and foreign investors to participate in the essential innovative projects while maintaining state control over the activities of developers and manufacturers of food products; construction of new facilities, modernization of

equipment, technical re-equipment, reconstruction of production workshops and sites; introduction of modern technologies for food production, expansion of the range, improvement of the quality and competitiveness of products.

State support for the development of competitiveness of agri-food sectors is vital, but many unresolved problems are reflected in the results of its activities. Therefore, first of all, it is necessary to regulate and ensure proper financing and its proper distribution to create more favorable conditions for investment in order to accumulate funds in the priority areas of activity of economic facilities in the agri-food sector, to improve the mechanism of support for lending to commodity producers, to turn the agricultural insurance system into a source of property protection, to regulate prices for agricultural products not only of agricultural producers but also in the logistics chains of intermediary structures. Only with proper state support does Ukraine can promote the development of competitiveness of agri-food sectors, including in world markets.

Along with improving forms, methods, and tools of state support for competitive agricultural production as a raw material basis for the agri-food sector, it is also essential to substantiate specialized measures for further support of business entities in the food industry. The strategic goal of state support should be to increase the production of a wide range of high-quality food with a high share of added value and auditing taste properties that can meet the demand of the population of the Ukrainian and European markets. The key strategic objectives in achieving this goal should be the following (Fig. 3.16).

The critical conditions for obtaining state support to increase the competitiveness of food industry enterprises should be the intensification of innovation activities and a high level of social responsibility of the food business regarding the quality and safety of food products. To meet international food quality standards, the products of Ukrainian manufacturers must meet sanitary, phytosanitary, and technical marketing requirements. Social Responsibility in terms of the quality and safety of food products is proved through their certification. Examples of such global standards are GLOBALG.A.P.C., FSSC

220001, British Retail Consortium (BRC), International Featured Standard (IFS) or Safe Quality Food (SQF) and others. It is promising to create new business models of agro-food production through closed agri-food value chains to increase competitiveness. A crucial element of management in such chains should be integrated product quality systems at all stages of their production (production, packaging, transportation, storage, certification, labeling, and sale).

Fig. 3.16. Tasks of state support for the competitive food industry sector

Source: author's development

Strategic trends in the further activities of food industry enterprises in the context of ensuring the competitiveness of products in world food markets should be the improvement of the ingredient composition and the rejection of the use of recipes for trans fats, palm oil, and GMOs. It is necessary to develop specialized state support programs at the first stages of the modernization of food production

to compensate for part of the costs of reorientation and re-profiling of production facilities. The criterion for receiving such targeted financial assistance from the state can be food quality certificates of domestic producers, which open up opportunities for access to Ukrainian products in European and world markets. Implementing support in this area also involves improving the information and methodological support of agri-food producers in terms of quotas, restrictions, phytosanitary requirements, processes, and requirements for product labeling, certification, etc.

State regulation at this stage also requires further development of infrastructure support for the activities of food industry enterprises. The number and condition of infrastructure facilities for such products as vegetables, fruits, berries, meat, and milk are critical. Solving these problematic aspects requires state and local authorities to create logistics centers (hubs) with terminals for the transportation and storage of food products.

Systematizing the presence of problematic aspects and with the implementation of strategic goals for the further development of the competitive agri-food sector of Ukraine in the national and world markets, it is possible to outline the main directions of state support for producers (Fig. 3.17).

Given the importance and priority, the issue of increasing the competitiveness of agri-food producers in Ukraine always lies in the strategic plan for further development. Already today, the close connection between increasing competitiveness and the requirements, tendencies, and trends that have arisen and will be strengthened in the context of Ukraine's accession to the leading practice of greening the agri-food sector and its implementation in the general system of sustainable national and global economies of the world is manifested. To do this, Ukrainian producers must be deeply aware of the values and principles of sustainable, inclusive development and intensify them in their current practice. Solving this problem is a complex and lengthy process requiring the agri-food business to shift priorities from maximizing profits and profitability in the short term to creating long-term bonuses.

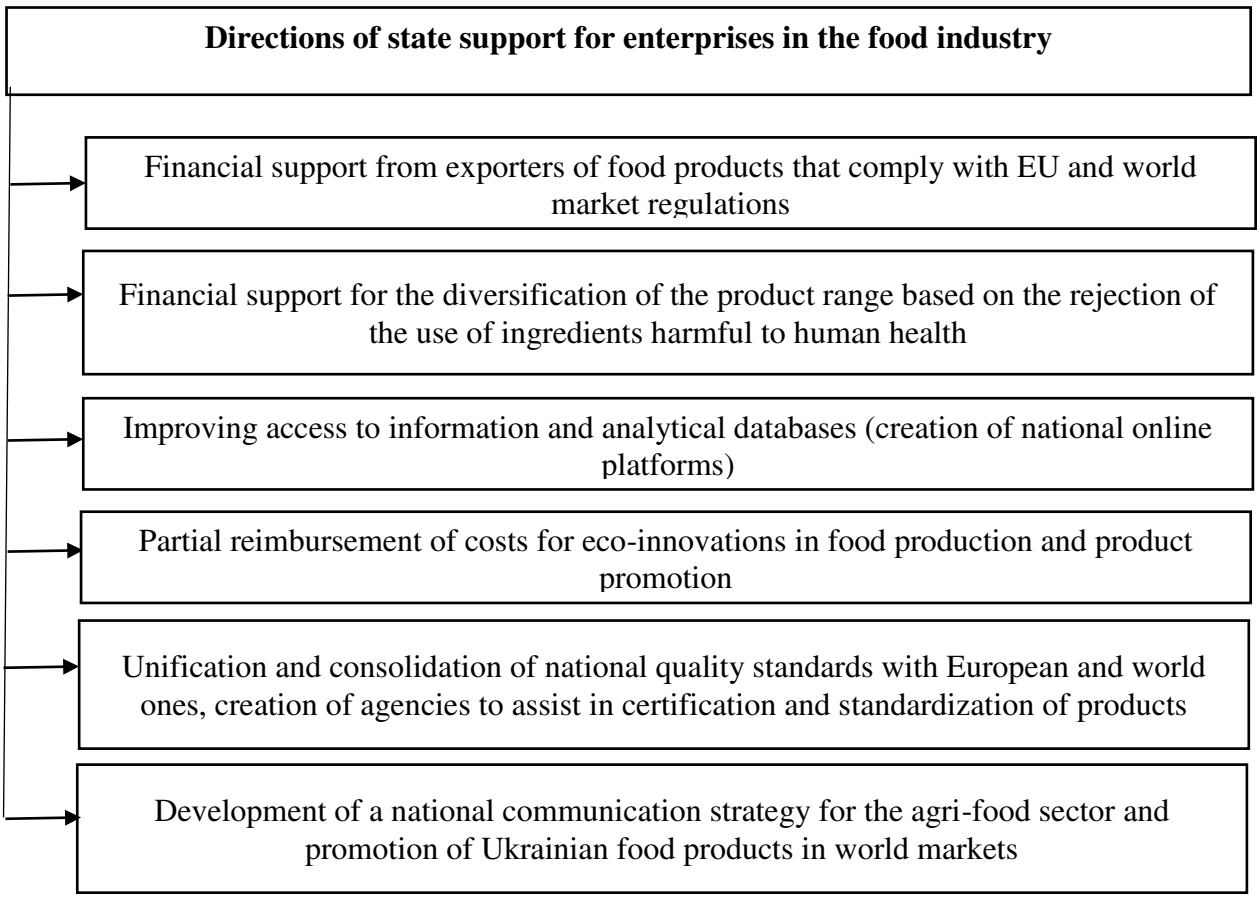


Fig. 3.17. Directions of concentration of measures of state support for the competitive food industry of Ukraine

Source: author's development

At the same time, it is essential to have a margin of the financial strength of business structures, which will determine their potential ability to receive long-term benefits and create strategic values as an alternative to increasing profitability in the short term. Among the key steps to increase competitiveness in the landscape of the transformational transition to the concept of sustainable development, agri-food companies need to pay attention to the measures presented in Fig. 3.18.

Implementing these steps and the impact of strategic priorities formed in the agri-food sector of European countries and developed countries require a certain reorientation of existing approaches and areas of assistance provided to business entities. According to the concept and strategy of the Green Deal, which in the

coming years will become dominant for the further development of European countries, the leading areas of state support for agri-food production will be the following: support for improving the efficiency of waste management and the dissemination of circular agri-food business models; modernization of assets; improving energy efficiency and producing renewable energy; organic production; supporting the transfer of innovative and environmentally friendly technologies; climate-neutral methods and ways of organizing food production [184].

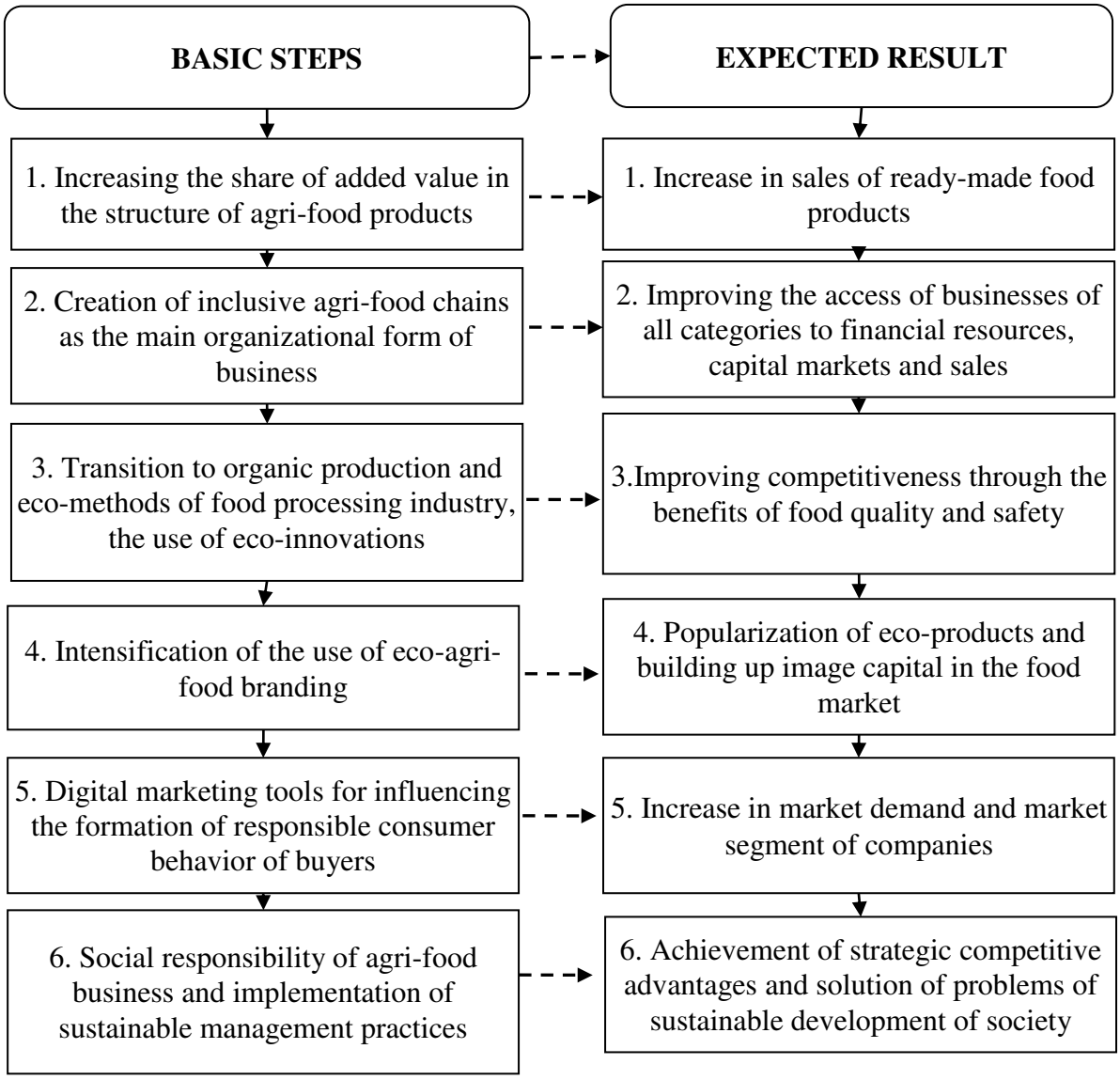


Fig. 3.18. Key steps to increase the long-term competitiveness of agri-food enterprises on the basis of sustainable development

Source: compiled by the author

Ukraine has also joined the leading European and world practice of adhering to the course of the "Green" economy. The sphere of agri-food production is an

essential component of this plan. It largely determines the results and success of achieving the tasks set in the context of European priorities for developing the Ukrainian economy. Considering the strategic directions of APV development based on sustainable development and an environmentally friendly economy, the directions of state support for the domestic agri-food sector should include implementing the following set of measures (Table 3.6).

Table 3.6

Measures of state support for the agri-food sector aimed at ensuring sustainable competitiveness

Measures	The content of the events
Activity 1	Supporting the investment climate and investing in tangible assets and technologies of agricultural companies and farms that contribute to sustainable development
Activity 2	Support for the investment climate and investment in tangible assets and technologies of food processing enterprises to ensure compliance of processes and products with safety standards and quality requirements of EU countries
Activity 3	Stimulating and increasing the volume of financial support for organic agriculture
Activity 4	Diversification, financial, and advisory support for the development of farming
Activity 5	Support for improving the level of professional skills and competencies of personnel employed in the agri-food sector, financial support for higher education in specialized HEIs
Activity 6	Investments in agricultural and production infrastructure
Activity 7	Supporting the implementation of local development strategies, supporting the activities of local initiative groups
Activity 8	Organizational and institutional support aimed at improving information-analytical and advisory services to business entities in the agri-food sector
Activity 9	Promoting the creation and operation of digital platform services to ensure inclusive access of all actors in agri-food chains to capital markets, information, and sales

Source: compiled by the author

The combination of all directions and instruments of state regulation and support of competitive agri-food production requires the creation and launch of action within a single management mechanism. The general purpose of creating

such a mechanism is to ensure the food security of the population of Ukraine and increase the level of its well-being and quality of life. Related goals are to increase the competitiveness of domestic agricultural and food products, which will form the necessary strategic prerequisites for achieving the primary goal, considering and satisfying the interests of present and future generations of Ukrainians.

Conclusion to Chapter III

1. The implementation of strategies to increase the level of competitiveness of agri-food enterprises in the practical plane requires the justification of clear and effective mechanisms that consider the specifics of agri-food business management, current and future market development trends, and a set of external and internal environmental factors. A critical condition for implementing competitiveness strategies is the financial potential of business entities; the scope and scale determine the landscape of strategic transformations and results. The proposed algorithm for the implementation of the strategies of agro-food sector enterprises should be systemic and contain elements that will allow balancing the values and interests of all participants in the agro-product value chain to achieve the strategic goals of a sustainable competitive business.

2. The core of strategies for increasing the competitiveness of business entities in the agri-food business is a financial mechanism, the architecture of which is proposed based on a synergistic combination of two main blocks: financial-organizational and financial-economic. The main strategic goal of the financial mechanism is the inclusive provision of all participants in the agro-food value chain with financial resources based on sustainable development and the multiplier effect of the drivers of investment and innovation development. As such drivers, according to the research results, it is proposed to use new forms of organization of leasing relations (business option of prolonged purchase (replacement) of the leased object based on the use of a preferential credit and financial mechanism); improved forms of organization of financial relations in the

field of agro-food sector (mixed financing, risk reduction techniques in the chain, joint capital management, creation of a single financial support center; permanent bonds, permanent loans and subsidies). The priority strategic form of accumulation of attracting inclusive financial resources to the agro-food sector is mixed financing based on creating centers for inclusive financial support of the agro-food chain.

3. based on the conducted gradient coefficient analysis, it was found that the main factors in the implementation of strategies to increase the competitiveness of business entities in the agri-food sector, which exert a predominant influence on the value of the integral indicator of competitiveness potential, is the financial condition, human capital, and material capital.

4. Conducted studies have shown that approaches to the strategic management of the competitiveness of agri-food enterprises must have a high degree of flexibility and adaptability depending on the state of the factors of the business environment, under the influence of which agri-food value chains are formed and function. The chain principles of production and business organization are proposed as a priority under the conditions of the modern business environment for developing the domestic agro-food sector. Taking these principles and principles into account forms the prerequisite for the justification of new competitive policy strategies for agri-food enterprises based on the values of sustainable and inclusive development.

5. Among the strategic drivers of increasing the competitiveness of participants in agro-food value chains, the following were identified: innovations and smart-agriculture 5.0; intensification of the pace of digitization transformations of the industry; environmental standards and certification; organic agricultural production and development of circular business models; socially responsible marketing policy and branding.

6. The implementation of strategies to increase competitiveness will take place based on further digitalization, which forms a powerful potential of the marketing toolkit of agro-food enterprises. Among the most promising marketing

tools for enterprises were offered: marketing tools in social networks, electronic marketing, tools for search optimization of sites and digital communication policy, website conversion optimization tools, and methods to increase actual and potential leads.

7. The factor assessment of the factors for achieving strategic competitive advantages in the market of agro-food products showed that the critical driver of increasing the competitiveness of enterprises should be environmental innovations. According to the author's methodical approach, among the main types of eco-innovations, it is advisable to separate product, process, and organizational ones, the synergistic action of which is aimed at creating the potential of competitive advantages to achieve the goals of sustainable development of the agro-food sector.

8. The agro-food sector is strategically vital for the national economy, which determines its excluded importance from the standpoint of state forms and methods of support in the direction of ensuring competitiveness in the long term. The analysis of the volumes and forms of state support for business entities in the agri-food sector showed that the Kharkiv region is one of the leaders in the scale of state financial assistance. A comparative assessment of the size of state support for the industry and indicators of food consumption, which reflect the forecast expectations of development strategies, showed that in the future, state aid should remain an indispensable element of the system of strategic management of the industry's competitiveness. The priority tasks of further state support for the country's competitive agro-food sector should be institutional and financial state support for improving and diversifying the commercial food assortment of enterprises, further improvement and unification of quality and safety standards of agricultural raw materials and food products; stimulating the scaling of eco-innovations; development and implementation of global communication to promote the image of the national food industry on world markets, continuing active work on creating a national culture of quality and responsible consumption among the population and business.

CONCLUSIONS

1. The analysis of the development of economic structures at the branch level, the basis of which was the identification of current challenges of the external environment, made it possible to formulate the main direction of the transformation of the strategic mission in the agro-food sector. It was determined that considering the main trends in the formatting of the socio-economic space in the plane of the combination of ecological and humanistic ethics corresponds to the paradigm of sustainable development in terms of content. At the same time, at the level of individual business entities, the strategic mission of the agri-food sector is transformed into the implementation of ESG principles as a necessary element of the mutual influence of micro- and macro-economic components of the economic system.

2. The algorithm of strategic management of the competitiveness of the agro-food sector is represented by a system of interdependent stages, including analysis of the external environment, formulation of the mission, analysis of the internal environment, formulation of goals for competitiveness management, strategic choice, setting of tasks, development of plans, implementation of changes, control. Their implementation occurs by combining the hierarchical principle with corrective action, which performs the function of providing stable feedback and meets the challenges of the external environment, which is characterized by instability, uncertainty, complexity, and ambiguity. The methodological basis for the implementation of strategic management in the agri-food sector is the implementation of the principles of responding to weak signals based on the creation of an effective mechanism for organizing the receipt and processing of information flows intended to support decision-making to optimize the processes of mobilizing internal potential based on the synergy of resource, location, structural, and organizational components.

3. It is recognized that the critical aspect of increasing the competitiveness of agri-food business entities is the financial mechanism, which is implemented in the

synergistic unity of the financial-organizational and financial-economic blocks. The author's vision of the architecture of the financial mechanism is represented by a system of levers, methods, forms, and a model of providing agro-food enterprises with financial resources. The orientation towards the inclusive provision of all participants of the agro-food value chain with financial resources based on the implementation of the components of the sustainable development paradigm, the core of which is ecological priorities and values, and the stimulation of the multiplier effect of investment and innovation drivers has been recognized as a strategic guideline. Applied aspects of implementing the financial mechanism include creating centers for inclusive financial support of the agro-food chain, which acts as the institutional basis of mixed financing. The concretization of the meaningful component of the system of drivers of an investment-innovative nature made it possible to present their structure, which included new forms of organization of leasing relations (business option of prolonged purchase (replacement) of the leasing object based on the use of a preferential credit and financial mechanism); improved forms of organization of financial relations in the agri-food sector (mixed financing, risk reduction methodologies in the chain, joint capital management, creation of a single financial support center; fixed bonds, fixed loans and subsidies).

4. A mechanism for increasing the competitiveness of agro-food industries is presented, which combines factors of the micro- and macroeconomic levels, which characterize the state of the components of the competitive environment and provide:

an opportunity to respond to changes in the market situation,

taking into account the elasticity of demand,

the dynamics of supply and its volumes.

The system of tools for implementing the proposed mechanism includes market segmentation based on the criterion of qualitative assessment of the needs of existing and potential consumers, analysis of current and projected competitiveness of goods, and taking into account the assessment of trends in the

transformation of consumer tastes. The methodological support of the process of increasing the competitiveness of the agro-food sector is based on the principles of benchmarking, which includes the assessment and comparison of the performance indicators of economic entities with reference samples of the effective functioning of direct competitors. In this way, the implementation of the results of the analysis of the microeconomic marketing environment in the mechanism of improving the complex strategic management measures at the industry level is ensured.

5. Methodical approaches to the organization of leasing financial relations in the agro-food sector have been developed based on the study of the practice of using leasing as a tool for the material and technical equipment of producers. In our opinion, in addition to traditional forms of operational and financial leasing (fixed total amount of leasing payment, payment with an advance (deposit), minimum leasing fee, unspecified rent, set as a percentage of sales volume, amount of used funds, market interest rates, etc.) it is advisable to use the business option of extended purchase (replacement) of the leased object based on the development of a preferential credit and financial mechanism between the lessor and the lessee. Prolonged purchase involves a fixed payment at the expense of the loan, the possibility of replacing the equipment with a new one, and flexible conditions for the purchase (return) of the leased object.

6. An approach to managing the competitiveness of agro-food enterprises is proposed and developed on the conceptual basis of the chain principle of production and business organization, which meets the conditions of the modern business environment. The results of the study showed that strategic approaches to the development of the competitiveness of the components of the agro-food value chain should meet the criterion of a high degree of flexibility and adaptability. Strategic drivers for increasing the competitiveness of participants in the agro-food chain have been identified, including innovations and smart-agriculture 5.0; intensification of the pace of digitization transformations of the industry; environmental standards and certification; organic agricultural production and development of circular business models; socially responsible marketing policy

and branding. Digitization of business processes at agri-food enterprises in the field of marketing activities expands its instrumental content by supplementing it with marketing tools in social networks, electronic marketing, search optimization of sites and digital communication policy, website conversion optimization, and increase of actual and potential leads.

7. A system for assessing the competitiveness of agro-food production enterprises is proposed, taking into account such a feature as the significant role of regional localization in inter-industry relations. The presented assessment system is based on the qualitative criterion of balancing the actions of micro-level subjects and state authorities (in the hierarchical structure of their interaction) to create competitive advantages based on the available volumes and actual quality of production factors (natural, human potential; fixed and working capital, infrastructure), the ability to use the determinants of production factors (investments, innovations, development of connected and supporting industries) and the ability to create conditions for the activation of the determinants of production factors (economic, organizational, political, legal, social conditions).

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APPLICATIONS

APPLICATION A

Список публікацій здобувача:

в яких опубліковані основні наукові результати дисертації

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