“Managerial and organizational factors shaping export participation among food manufacturing firms in Kazakhstan”

AUTHORS	Kuralay Nurgaliyeva Akan Nurbatsin Marat Urdabayev Medet Konyrbekov Peter Karácsony

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Kuralay Nurgaliyeva (Kazakhstan), **Akan Nurbatsin** (Kazakhstan), **Marat Urdabayev** (Kazakhstan), **Medet Konyrbekov** (Kazakhstan), **Peter Karácsony** (Hungary)

MANAGERIAL AND ORGANIZATIONAL FACTORS SHAPING EXPORT PARTICIPATION AMONG FOOD MANUFACTURING FIRMS IN KAZAKHSTAN

Abstract

Export diversification and the growth of non-resource exports remain key strategic priorities for Kazakhstan, particularly for food manufacturing firms facing organizational and institutional obstacles to participation in international markets. We seek to assess managerial, institutional, organizational, and ownership-related drivers associated with direct and broader export participation, targeting food manufacturing enterprises in Kazakhstan. The empirical analysis uses the food sampling-sector domain of the 2024 World Bank Enterprise Survey for Kazakhstan. The complete national dataset contains 1,013 establishments, and the initial food-domain subsample comprised 128 establishments. After listwise deletion of observations with missing values, the final estimation sample consisted of n = 121 establishments in the direct export model and n = 121 establishments in the any-export model. The statistical analysis applies survey-weighted logistic regression and average marginal effects. The findings suggest that organizational capabilities are important for firms' export operations. Digital presence (β = 2.030; p = 0.004), process innovation (β = 1.789; p = 0.010), and firm size (β = 1.491; p = 0.001) are positively associated with direct export participation. Broader export involvement is associated with foreign ownership and customs restrictions. Strengthening export competitiveness therefore requires improvements in organizational preparedness, innovation, digital communication, customs procedures, and logistics.

Keywords export participation, agro-processing firms, food manufacturing, managerial capabilities, organizational factors, digital presence, process innovation, Kazakhstan

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Kuralay Nurgaliyeva, Ph.D. in Economics, Associate Professor, Science Department, Faculty of Finance and Accounting, Kenzhegali Sagadiyev University of International Business, Kazakhstan.

Akan Nurbatsin, Ph.D., Associate Professor, Science Department, Faculty of Finance and Accounting, Kenzhegali Sagadiyev University of International Business, Kazakhstan.

Marat Urdabayev, Researcher, Institute of Economics of the Science Committee of the MSHE of the Republic of Kazakhstan, Kazakhstan.

Medet Konyrbekov, Ph.D., Associate Professor, International Centre for Academic Research and Innovation, Kazakhstan.

Peter Karácsony, Ph.D., Professor, Department of Marketing, Management and Methodology, Keleti Karoly Faculty of Business and Management, Obuda University, Hungary. (Corresponding author)

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INTRODUCTION

This study views the agro-processing sector as the food manufacturing segment represented by the food industry category of the Kazakhstan 2024 World Bank Enterprise Survey. The empirical analysis does not cover primary agricultural producers or farms. It focuses on registered food manufacturing establishments engaged in the processing and production of food products. For managers and policymakers, the key challenge is that insufficient organizational capability may limit export readiness even when production potential exists. For example, as of 2024, agriculture accounted for only 3.94% of the country's GDP, while total output rose by 13.7%, primarily due to a 21.1% increase in crop yields (International Trade Administration, 2026). Moreover, there is even more evidence of the sector's increasing export potential: as of 2025, Kazakhstan's agricultural exports grew by nearly 40%, including popular exports such as wheat, sunflower oil, animal feed, wheat flour, and barley (QazTrade, 2025).

This issue is especially relevant in Kazakhstan, where the modernization of the economy and the diversification of exports remain central policy objectives. Despite substantial agricultural potential, favorable geographic positioning, and growing policy attention to non-resource exports, the performance of agri-food enterprises in international markets remains uneven. Many firms continue to face institutional and infrastructural constraints, including customs frictions, transport inefficiencies, weak digital adoption, and limited organizational upgrading. In a transition economy such as Kazakhstan, these limitations imply a critical imbalance that arises when production capabilities outpace firms' managerial capabilities to participate effectively in export-oriented value chains.

The current literature suggests that export activity is not only related to productivity, finance, and scale of operations, but also to firms' organizational readiness to meet the demands of international markets. This is particularly the case in the agri-food sector, where export activity necessitates compliance with food safety standards, quality certification, product tracking, logistical coordination, and coordination with foreign partners. Hence, export activity among firms in the agri-food sector depends not only on productive efficiency but also on their ability to manage internal operations, innovate, communicate through digital platforms, and cope with institutional constraints.

In Kazakhstan, although the country has vast agricultural potential, existing studies on firm-level determinants of agri-food export participation are rather scarce. Most studies focus on production capability, trade potential, or competitiveness, with insufficient attention to the combined influence of managerial capability, organizational upgrading, firm ownership, and institutional constraints. This paper seeks to fill this research gap by providing firm-level econometric evidence.

1. LITERATURE REVIEW AND HYPOTHESES

Firms' participation in export activities is a complex strategic decision shaped by both the internal characteristics of the enterprise and external institutional, infrastructural, and market conditions. The classical literature on international trade shows that export activity is unevenly distributed among firms: only a limited proportion of enterprises enter foreign markets, while exporters tend to have higher productivity, a larger size, a stable financial base, and a developed organizational structure (Bernard & Jensen, 1999; Melitz, 2003; Bernard et al., 2007). These findings became the basis for further research on corporate determinants of participation in foreign trade and the differences between exporting and non-exporting enterprises (Helpman et al., 2004; Wagner, 2007). At the same time, explaining export behavior solely through the productivity and size of the firm proved insufficient, since enterprises with comparable resource characteristics may demonstrate different ability to enter international markets. These limitations shifted research attention toward managerial, organizational, and institutional determinants that explain why firms with comparable resources demonstrate different export performance.

Alongside the development of firm heterogeneity theory in international trade, the resource-based view emphasized firms' internal assets and capabilities as a source of sustainable competitive advantage (Barney, 1991). In the context of export activities, access to financial resources, technological level, production facilities, and investments in modernization increase the likelihood of a company entering foreign markets (Roberts & Tybout, 1997; Greenaway et al., 2007; Aw et al., 2011). Innovation activity is also an important factor in expanding export opportunities, as it improves product quality, reduces costs, and helps adapt to foreign consumer requirements (Cassiman & Golovko, 2011). However, a significant part of these studies considers the company's resources primarily as initial conditions, without fully disclosing the mechanisms for their mobilization and transformation into export advantages. In this regard, analyzing the managerial abilities and organizational practices through which an enterprise uses available resources to develop foreign markets is particularly vital.

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The shift in research focus from resource characteristics to managerial abilities and organizational practices has become one of the significant areas of modern literature. Bloom and Van Reenen (2010) showed that the quality of management varies significantly between firms and is a factor in productivity, growth, and competitiveness. In turn, Helfat and Martin (2015) developed the concept of managerial dynamic abilities, emphasizing that management's ability to adapt organizational processes to changing conditions determines a firm's strategic results, including its international expansion. In empirical research, managerial abilities are manifested through the introduction of structured management practices, digitalization of business processes, investments in human capital, development of quality control procedures, and the ability to learn organizationally (Kafouros et al., 2008; Love & Roper, 2015). These factors are crucial in industries where export activities require compliance with external standards, supply sustainability, and coordination of multi-stage production processes.

The agri-food sector represents a specific environment for analyzing firms' export behavior. Its features are related to the biological properties of products, high sensitivity to storage and transportation times, the need to comply with sanitary, phytosanitary, and technical requirements, as well as dependence on the quality of the logistics infrastructure. Early studies have shown that quality and safety standards are of key importance for agricultural and food products, since access to international markets largely depends on the manufacturer's ability to confirm the stability and reliability of products (Henson & Reardon, 2005). Cheptea et al. (2015) note that internal quality control systems and international safety standards are important prerequisites for agri-food enterprises to enter foreign markets. In addition, the export of agri-food products is largely determined by compliance with sanitary and phytosanitary requirements, ensuring product traceability and maintaining stable quality at all stages of the supply chain (Santeramo & Lamonaca, 2019). Under these conditions, international certification, standardization, and quality management systems act both as formal requirements and organizational mechanisms that allow firms to reduce information asymmetries, strengthen the trust of foreign partners, and reduce transaction costs.

Digitalization of business processes is a relatively new but rapidly developing area of research on firms' export behavior. A corporate website, electronic platforms for interacting with foreign partners, digitalization of operational processes, and online communication can reduce barriers to entry into international markets. These tools expand access to information about foreign demand, simplify marketing communications, and allow businesses to partially compensate for geographical distance from target markets (OECD, 2024). In the agri-food sector, digital technologies contribute to ensuring product traceability, monitoring storage conditions, optimizing logistics routes, and increasing the transparency of supply chains. Therefore, the company's digital presence is one of the indicators of its readiness for export activities.

Along with the internal characteristics of firms, export activity significantly depends on external institutional and infrastructural conditions. The concept of trade costs shows that international trade involves not only tariff barriers but also time delays, administrative procedures, certification costs, logistics, and regulatory compliance (Anderson & Van Wincoop, 2004). The quality of transport infrastructure, accessibility of cold chains, efficiency of border procedures, and sustainability of logistics routes are necessary for the agri-food sector (Liapis, 2011; Brooks & Matthews, 2015; Arvis et al., 2018). Empirical studies show that transportation time and shipping delays can have an impact comparable to ad valorem trade barriers (Djankov et al., 2010; Hummels & Schaur, 2013). In developing countries and economies in transition, where infrastructure constraints often remain significant, firms' internal organizational capabilities (the ability to plan logistics, manage inventory, coordinate supplies, and ensure quality stability) are becoming critical for overcoming external barriers.

Research on export activities in transition and developing countries reveals a number of specific constraints affecting enterprises' decisions to enter foreign markets. Bobojonov et al. (2016), using the example of farms in Armenia and Uzbekistan, showed that participation in exports depends on sales channels and access to market information. Esenaliev (2023), in a study of Kyrgyzstan, found that the decision of small producers to enter for-

eign markets is largely determined by geographical remoteness, poor development of value chains, and limited access to infrastructure. In recent years, significant attention has been paid in the Ukrainian literature to the transformation of logistics routes, modernization of border infrastructure, and adaptation of agri-food exports to new external constraints (Penkova & Kharenko, 2023; Samoilyk & Zhaivoron, 2023). Taken together, these studies emphasize the importance of logistical and institutional factors, but to a lesser extent reveal the role of internal management characteristics of enterprises as independent determinants of export behavior.

In Kazakhstan, the literature on the export potential of the agri-food sector remains relatively limited and fragmented. Existing studies mainly consider certain industry aspects, including the infrastructure of the grain market, livestock development (Konyrbekov, 2015), technology transfer in the agricultural sector (Manatovna et al., 2023), the potential for expanding bilateral trade with China (Abildaev et al., 2023), and the overall competitiveness of agri-food systems (Ayazbayeva et al., 2024; Smagulov et al., 2025). Despite the scientific significance of these works, most are primarily descriptive and conducted at the macroeconomic or sectoral level of analysis. The Kazakh literature contains few micro-level econometric studies based on individual enterprise data that simultaneously account for firms' managerial characteristics, digital presence, the availability of quality control systems, innovation activity, staff training, enterprise size, and transport and logistical constraints.

Thus, the participation of agri-food sector enterprises in export activities is determined not only by the volume of company resources, but also by managerial and organizational capabilities that ensure compliance with external standards, product quality control, and supply chain coordination. Although productivity, enterprise size, and resource availability remain important factors in export activity, modern research increasingly emphasizes the role of digitalization, process innovation, management expertise, and organizational modernization. However, there is still a limited number of studies analyzing the combined impact of these factors on the participation of enterprises in Kazakhstan's agri-food sector in export activities. Given these research gaps, the purpose of this study is to identify managerial and organizational factors affecting the likelihood of export participation among agri-food enterprises in Kazakhstan. Conceptually, the study assumes that export participation is shaped by the interaction between internal organizational capabilities and external institutional and logistical constraints.

Drawing on the resource-based view and the dynamic managerial capabilities perspective, this study conceptualizes export participation as the outcome of firms' ability to transform internal organizational resources into export-oriented capabilities under external institutional constraints. International quality certification reflects the ability to comply with external standards; digital presence reflects communication and market-access capability; process innovation and staff training reflect organizational upgrading and learning; and firm size reflects the capacity to absorb fixed costs related to export entry. Foreign ownership, transport obstacles, and customs-related barriers capture firms' external embeddedness and the institutional environment of foreign trade.

This study aims to identify and compare managerial, organizational, ownership-related, and institutional factors associated with direct and broader export participation among food manufacturing firms in Kazakhstan.

Therefore, export participation is interpreted as the interaction between internal organizational preparedness and external market-access conditions. Based on the literature review, the following research hypotheses are formulated:

H1: International quality certification is positively associated with the likelihood of export participation.

H2: A firm's digital presence, measured by its own website or social media page, is positively associated with the likelihood of direct export participation.

H3a: Process innovation is positively associated with the likelihood of direct export participation.

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H3b: Staff training is positively associated with the likelihood of export participation.

H4: Firm size is positively associated with the likelihood of export participation, as larger firms are better able to absorb the fixed costs of entering international markets.

H5: Foreign ownership is positively associated with broader export participation, including indirect involvement through intermediaries and export-oriented value chains.

H6: Transport and customs-related obstacles are associated with export participation, although the direction of this relationship may be ambiguous because firms already involved in export activity are more likely to experience and report such barriers.

The reviewed studies indicate that the export participation of agro-processing firms is associated with a combination of internal organizational capabilities and external institutional conditions. Digital presence, internationally recognized certification, process innovation, staff training, managerial experience, firm size, foreign ownership, and exposure to transport and customs-related obstacles may affect firms' ability to enter foreign markets independently or through intermediaries. However, these relationships have received limited firm-level empirical attention in Kazakhstan's agro-processing sector.

2. METHOD

This study examines managerial, organizational, and institutional factors associated with export participation among food manufacturing establishments representing Kazakhstan's agro-processing sector. The analysis focuses specifically on registered firms engaged in food processing and manufacturing. Primary agricultural producers, farms, retailers, restaurants, service providers, and establishments from other manufacturing industries are outside the empirical scope of this study.

The empirical analysis uses microdata from the 2024 World Bank Enterprise Survey for Kazakhstan. The complete survey contains 1,013 establishments distributed across seven sampling-sector categories: food, garments, non-metallic mineral products, other manufacturing, construction, retail, and other services. The analytical domain was defined using the WBES Industry Sampling Sector variable a4a, with a4a = 1 denoting food; this produced an initial subsample of 128 establishments. The realized main activity is reported separately in d1a2_v4 (four-digit ISIC Rev. 4). Within the selected food sampling domain, 120 establishments reported activities in ISIC Rev. 4 Division 10 (codes 1010, 1020, 1030, 1040, 1050, 1061, 1071-1075, 1079, and 1080), one reported beverage activity 1104, and seven reported realized activities outside Divisions 10-11 (2013, 2023, 2100, 3312, 4711, and 4721). These seven establishments were retained because domain membership follows the survey's sampling classification a4a rather than a post-survey reclassification. Thus, the domain is predominantly food manufacturing but is not identical to a strict ex-post filter on d1a2_v4. Primary agricultural producers and farms are not included. After listwise deletion, both regression models use $n = 121$ establishments. Table 1 presents the descriptive statistics for the variables used in the analysis.

The methodological rationale is based on the following premise: the development of enterprises in the agro-processing sector and their integration into international markets depend to a large extent on management capabilities. Indeed, in new agro-processing systems of production, it is necessary to coordinate the production and delivery times, respect the standards of quality and safety, maintain a good level of communication with the suppliers and the buyers, adapt the internal management to the requirements of the market, and face the uncertainties of logistics, transportation, and customs. In such a context, export participation is considered a result of management rather than of financial capabilities. This approach is particularly relevant for management-oriented research.

To apply the above rationale to the empirical analysis, two dependent variables were defined. The first refers to enterprises' export participation, while the second refers to enterprises' export participation in a broader sense. However, firms can engage in international trade not only through their own exports but also indirectly via interme-

Table 1. Descriptive statistics for the agro-processing firms sample

Variable	Description and measurement	N	Mean	SD	Min	Max
DirectExport	Variable equals 1 if the establishment reports positive direct exports, 0 otherwise	128	0.234	0.425	0.000	1.000
AnyExport	Variable equals 1 if the establishment reports positive direct or indirect exports, 0 otherwise	128	0.320	0.468	0.000	1.000
Website	Binary variable equals 1 if the establishment has its own website (digital presence), 0 otherwise	128	0.609	0.490	0.000	1.000
QualityCert	Dummy variable equals 1 if the establishment has an internationally recognized quality certification	127	0.598	0.492	0.000	1.000
ProcessInnov	Dummy variable equals 1 if the establishment introduced a new or significantly improved production process during the last three years	128	0.180	0.385	0.000	1.000
Training	Dummy variable equals 1 if the establishment provided formal training programs for permanent full-time employees in the last fiscal year	128	0.258	0.439	0.000	1.000
ManagerExp	Number of years of sector-specific experience of the top manager	128	12.977	6.728	1.000	30.000
FemaleManager	Dummy variable equals 1 if the top manager of the establishment is female	128	0.242	0.430	0.000	1.000
ForeignOwn	Percentage of the firm's ownership held by foreign individuals or companies	128	8.750	25.595	0.000	100.000
LnEmp	Natural logarithm of the number of permanent full-time employees	128	3.573	1.339	1.609	8.412
TransportObstacle	Perceived severity of transport infrastructure as an obstacle to the establishment's operations (0 = no obstacle; 4 = very severe obstacle)	125	2.080	1.293	0.000	4.000
CustomsObstacle	Perceived severity of customs and trade regulations as an obstacle to the establishment's operations (0 = no obstacle; 4 = very severe obstacle)	122	1.098	1.174	0.000	4.000

diaries. Therefore, the second dependent variable measures any kind of export participation, including both direct and indirect exports. In particular, the use of two distinct dependent variables enables differentiation between enterprises that operate independently in foreign markets and those that engage in export activities through intermediary enterprises in export-oriented value chains. This distinction is theoretically relevant to the analysis of enterprises in Kazakhstan's agro-processing sector because some enterprises do not export directly but still operate in export-oriented production and supply chains.

The most relevant explanatory variables are selected to capture different aspects of management capacity that may affect enterprises' export activities in the agro-processing sector. First, digital presence is used as a dummy variable for whether the establishment has its own website. This is a key component of a firm's digital communication capacity, enabling it to interact with external partners, customers, and market actors beyond the local environment. Second, the quality certificate is used as a dummy variable for whether the firm has acquired an internationally recognized quality certificate. This variable reflects enterprises' ability to comply with international standards for production and safety. Thirdly, the process innovation variable is included as a dummy variable indicating whether the establishment introduced new or improved production processes in the last three years. This variable accounts for the adaptability of organizations and enterprises and their ability to innovate their internal production systems.

In addition, training programs organized by firms for their permanent full-time employees are included as a further variable to account for managers' ability to invest in human capital. The manager's experience is measured by the number of years the top manager has been working in the sector. The top manager's gender is also included.

The share of foreign ownership is also included to account for the possible international orientation of enterprises and their integration into transnational business networks. Firm size is measured as the natural logarithm of the number of permanent full-time employees at the end of the last fis-

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cal year. The logarithmic transformation is used to reduce skewness in the firm size distribution and to capture proportional rather than absolute differences in size, as defined in (1):

$$LnEmp_i = \ln\left(L1_i\right), \quad (1)$$

where $LnEmp_i$ – the natural logarithm of the number of permanent full-time employees in establishment *i*; *Ln* – the natural logarithm; $L1_i$ – the total number of permanent full-time employees in establishment *i*.

In addition, two variables relating to external constraints are included: perceived transport obstacles and perceived customs and trade-regulation obstacles. These variables are particularly relevant to food manufacturing in Kazakhstan because export activity may be constrained by transport efficiency, border procedures, and market accessibility. No sector fixed effect is included because the analysis is restricted to a single WBES sampling-sector domain. Firm size is represented only by LnEmp, the natural logarithm of permanent full-time employment; a separate categorical size control is not included, avoiding duplicate adjustment for the same firm-size dimension. Region fixed effects are not reported as part of the regression specification.

The analysis is based on anonymized secondary data from the World Bank Enterprise Survey. We did not collect primary data directly from respondents. Therefore, no additional institutional ethics approval or informed consent procedure was required. As the empirical analysis is restricted to food manufacturing establishments, the findings should be interpreted as sector-specific evidence for Kazakhstan's agro-processing sector. They should not be generalized to primary agricultural producers, farms, or firms operating in other industries.

The study applies a quantitative cross-sectional research design based on secondary enterprise-level survey data. Since the data were collected before the present analysis, the study does not make causal claims but identifies statistically significant associations between managerial, organizational, and institutional variables and export participation.

The Enterprise Survey uses a stratified sampling design. The original WBES sampling weight wmedian (the weight based on the median eligibility assumption) was retained without recalibration or normalization after restricting the analysis to food. The food category (a4a = 1) was treated as a survey subpopulation/domain rather than as a new standalone simple random sample. The original WBES stratum identifier strata and the available survey-design information were retained when calculating design-based standard errors. The study does not use purposive sampling, the Slovin formula, or SEM-based sample-size justification.

Before the regression analysis, negative survey codes were recorded as system-missing values. The Enterprise Survey data structure uses negative numbers to indicate missing, inapplicable, or non-response data. However, these values should be replaced with system-missing values to prevent them from being mistakenly used as actual data during analysis. Replacing these values with system missing ensures that they are not mistakenly treated as valid observations during estimation. Explanatory binary variables were also created in a consistent manner. This is done to ensure that a value of 1 indicates the presence of a particular managerial or organizational capability for a firm, while a value of 0 indicates its absence. This allows the results to be interpreted straightforwardly regarding the impact of the presence or absence of particular characteristics on the probability of export participation.

Given the binary nature of the dependent variables, survey-weighted logistic regression is used as the primary estimation method. The use of survey weights and design-based standard errors is intended to improve the representativeness of the estimates for the population of eligible establishments covered by the food sampling domain of the Kazakhstan 2024 Enterprise Survey. The results are not representative of all enterprises in Kazakhstan. The model specification is given in (2):

$$\Pr\left(Y_i = 1 \middle| X_i\right) = F\left(Z_i\right), \quad (2)$$

where $\Pr(Y_i = 1|X_i)$ – probability that establishment *i* participates in export activity; Y_i – binary dependent variable (1 = export participation, 0 = otherwise); X_i – vector of explanatory variables; Z_i – linear predictor composed of explanatory variables.

It represents the weighted combination of explanatory variables affecting the probability of export participation. F(·) denotes the logistic cumulative distribution function, which transforms the linear predictor into a probability value bounded between 0 and 1, as shown in (3):

$$F\left(Z_i\right)=\frac{e\wedge\left(Z_i\right)}{1+e\wedge\left(Z_i\right)}, \quad (3)$$

where $F(Z_i)$ – the estimated probability of export participation for establishment *i*; *e* – the base of the natural logarithm; Z_i – the linear predictor composed of managerial, organizational, and control variables included in the empirical specification for establishment *i*; *i* – indexes the establishments in the sample.

The logistic regression is an appropriate model specification since it guarantees that the predicted probabilities are contained in the interval [0, 1] [0, 1]. It is also a flexible way to represent a nonlinear relationship. Although the results are based on a logistic regression, they are supplemented with average marginal effects, which indicate how a change in a variable affects the predicted probability of export participation. Logit estimates are not easily interpreted because they are expressed in log-odds form. Moreover, they are not easily discussed substantively. The results are supplemented with information on average marginal effects, which indicate how a change in a variable influences the predicted probabilities of export participation, controlling for the survey design and covariate structure. The marginal effect of a continuous variable x_k is given by (4):

$$AME_k=\frac{1}{N}\Sigma\ [\partial\frac{\Pr(Y_i=1\mid X_i)}{\partial x_{ki}}], \quad (4)$$

where AME_k – the average marginal effect of explanatory variable x_k on the probability of export participation; *N* – the total number of observations in the sample; $\partial\Pr(Y_i = 1|X_i) / \partial x_{ki}$ –the marginal change in the predicted probability associated with a small change in explanatory variable x_k for observation *i*.

For binary variables such as website, process innovation, and training, the marginal effect is interpreted as the average discrete change in the probability predicted when the variable changes from 0 to 1. This is particularly useful when discussing the managerial readiness of agri-food sector enterprises, as the results will be more applicable and easier to interpret.

The last aspect of methodology concerns the conceptual interpretation of the model's results. The applied economic methodology does not aim to establish strict causal links between individual factors and export participation. Rather, it focuses on identifying managerial and organizational characteristics statistically associated with export participation in Kazakhstan's agro-processing sector. Export participation is interpreted as a measure of the preparedness and ability of enterprises in Kazakhstan to operate in international markets and participate in export-oriented value chains.

From this perspective, the results provide insights into the micro-level determinants that could facilitate the integration of agro-processing enterprises into external markets. For instance, if enterprises that have a stronger digital footprint, higher levels of process innovation, larger organizational scales, and lower levels of coordination barriers are found to be more likely to be involved in export activities, it is not just necessary to focus on improving production capacity; rather, there is a need to focus on improving organizational capacity. Therefore, policies to support enterprise development in Kazakhstan's agro-processing sector need to consider a range of determinants, including digitalization, management skills development, quality management systems, and organizational modernization.

3. RESULTS

The empirical analysis identifies managerial, organizational, ownership-related, and institutional factors associated with export participation among agro-processing firms in Kazakhstan. Both regression models were estimated exclusively on the food-sector subsample extracted from the Kazakhstan 2024 World Bank Enterprise Survey. The first model examines direct export participation, while the second model examines any export participation, including both direct and indirect exports.

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Table 2. Survey-weighted logistic regression results for direct export participation

Variable	Coefficient	Std. Error	p-value
Website	2.030	0.701	0.004
QualityCert	0.661	0.633	0.297
ProcessInnov	1.789	0.697	0.010
Training	−1.606	0.702	0.022
ManagerExp	−0.098	0.079	0.218
FemaleManager	0.009	0.648	0.989
ForeignOwn	0.012	0.011	0.297
LnEmp	1.491	0.379	0.001
TransportObstacle	0.857	0.321	0.008
CustomsObstacle	0.380	0.186	0.041

Note: Observations: 121. Survey weights: Yes (wmedian). Design-based standard errors: Yes. Region fixed effects: No.

To provide a more substantive interpretation of the logistic regression coefficients, average marginal effects are additionally calculated. These effects estimate how the probability of export participation changes in response to variations in the relevant explanatory variables.

First, we consider the factors associated with firms' direct participation in export activities; the corresponding logistic regression results are presented in Table 2.

The results show that indicators reflecting digital presence, organizational changes, scale of activity, as well as perceived external constraints, have a statistically significant relationship with the likelihood of direct participation of enterprises in exports. Thus, having a company website is positively and statistically significantly associated with direct export (β = 2.030, p = 0.004), indicating that digital presence is an important factor in a firm's involvement in foreign markets. Similarly, the introduction of process innovations is positively and significantly associated with direct export (β = 1.789, p = 0.010), indicating that organizational renewal, technological adaptation, and a firm's ability to improve its internal processes increase its readiness to engage in foreign economic activity. Firm size is also a substantial positive factor (β = 1.491, p = 0.001), which indicates a higher probability of direct export among larger enterprises.

Figure 1 presents the odds ratios for the factors associated with export participation in the estimated models.

Figure 1 visualizes the odds ratios of digital presence, process innovation, firm size, foreign ownership, and customs-related constraints based on the results of the survey-weighted logistic regression

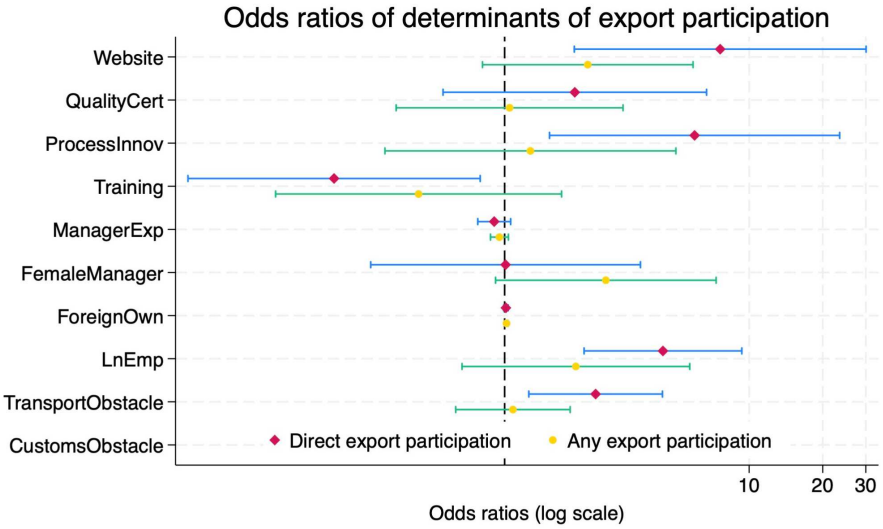

Figure 1. Odds ratios for factors associated with export participation among agro-processing firms

models on direct export participation and overall export participation. The visualization indicates that digital presence, process innovation, and firm size are highly correlated with direct export participation, while foreign ownership and customs-related constraints are more related to export participation via international production networks. However, several factors did not demonstrate a statistically significant relationship with export activity. In particular, international quality certification had a positive but insignificant coefficient (β = 0.661, p = 0.297), the manager's experience had a negative and also insignificant coefficient (β = –0.098, p = 0.218), the gender of the top manager had almost no effect (β = 0.009, p = 0.989), and the share of foreign ownership also did not show a significant effect (β = 0.012, p = 0.297). Overall, the results suggest that direct export participation is more strongly associated with digital presence, process innovation, and firm scale than with individual managerial characteristics or ownership structure. These findings underline the importance of organizational upgrading for export activity and are especially relevant for enterprises in Kazakhstan's agro-processing sector, where access to foreign markets requires not only production capacity but also managerial readiness and internal coordination capabilities.

For a more rational interpretation of the results of logistic regression, average marginal effects were calculated, which show how, on average, the probability of an enterprise's direct participation in exports changes with changes in relevant factors. The obtained estimates generally confirm the results of the basic logit model and present them in a more understandable, meaningful form. The results are provided in Table 3.

The calculated average marginal effects confirm the main conclusions of the logistic regression and interpret the results in terms of changes in the probability of direct participation in exports. Thus, having a website is positively associated with the probability of direct export (ME = 0.0357, p = 0.013), which confirms the importance of a firm's digital presence for its involvement in foreign markets. A positive and statistically significant effect is also identified for process innovations, and their presence increases the probability of direct export (ME = 0.0314, p = 0.022). Firm size also remains an important factor, as an increase in the number of permanent full-time employees is associated with a higher probability of direct participation in export activities (ME = 0.0262, p = 0.004). In addition, the variable for transport constraints also shows a positive effect (ME = 0.0151, p = 0.044), which may indicate that enterprises already engaged in export activities more often face logistical barriers and, accordingly, assess them more acutely.

At the same time, formal staff training programs are associated with a decrease in the probability of direct export (ME = –0.0282, p = 0.048), which may reflect sample characteristics, differences in firms' development strategies, or specific industry features. A positive marginal effect is also obtained for customs constraints (ME = 0.0067, p = 0.051), although its statistical significance is at a borderline level; therefore, this result should be interpreted with caution. At the same time, international quality certification (ME = 0.0116, p = 0.257), executive experience (ME = –0.0017, p = 0.278), gender of the top manager (ME = 0.0002, p = 0.989), and the share of foreign ownership (ME

Table 3. Average marginal effects for direct export participation

Variable	Marginal Effect	Std. Error	p-value
Website	0.0357	0.0143	0.013
QualityCert	0.0116	0.0102	0.257
ProcessInnov	0.0314	0.0136	0.022
Training	–0.0282	0.0142	0.048
ManagerExp	–0.0017	0.0016	0.278
FemaleManager	0.0002	0.0114	0.989
ForeignOwn	0.0002	0.0002	0.260
LnEmp	0.0262	0.0092	0.004
TransportObstacle	0.0151	0.0075	0.044
CustomsObstacle	0.0067	0.0034	0.051

Note: Observations: 121. Survey weights: Yes (wmedian). Design-based standard errors: Yes. Region fixed effects: No.

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Table 4. Survey-weighted logistic regression results for any export participation

Variable	Coefficient	Std. Error	p-value
Website	0.783	0.506	0.122
QualityCert	0.047	0.545	0.931
ProcessInnov	0.243	0.699	0.728
Training	−0.810	0.687	0.238
ManagerExp	−0.049	0.043	0.253
FemaleManager	0.953	0.530	0.072
ForeignOwn	0.018	0.0067	0.008
LnEmp	0.671	0.547	0.221
TransportObstacle	0.078	0.275	0.777
CustomsObstacle	1.108	0.267	0.001

Note: Observations: 121. Survey weights: Yes (wmedian). Design-based standard errors: Yes. Region fixed effects: No.

= 0.0002, p = 0.260) did not demonstrate statistically significant impact on the likelihood of direct participation in exports. Taken together, the average marginal effects confirm that managerial and organizational factors, particularly digital presence and process innovation, are closely associated with firms' export activity. In the context of Kazakhstan's agro-processing sector, this implies that strengthening export participation requires both material resources and improvements in internal organization, digital communication, and operational capacity.

Although direct exports capture firms that access international markets independently, some firms may participate in export-oriented production networks indirectly through intermediaries or supply chains. To capture this broader pattern of export involvement, an additional model was estimated using any export participation as the dependent variable. This category includes both direct exporters and firms that supply goods to intermediaries engaged in exporting. The results of the logistic regression model for any export participation are presented in Table 4.

Table 4 shows that the variables related to enterprises' participation in export activities generally differ somewhat from those related to direct exports. Thus, the share of foreign ownership has a positive and statistically significant coefficient (β = 0.018, p = 0.008), indicating a higher probability of participating in export activities among firms with foreign capital. Similarly, customs obstacles show a positive and highly significant effect (β = 1.108, p = 0.001), which may reflect that firms already engaged in export activities are more likely to encounter customs barriers and, accordingly, perceive them more acutely. A positive relationship is also observed for the variable indicating the female gender of the top manager (β = 0.953, p = 0.072), although the level of statistical significance remains borderline. The remaining variables did not demonstrate a statistically significant effect within the framework of this model. These results indicate that broader export participation is linked less to internal organizational characteristics and more to structural factors such as ownership structure and customs-related barriers. For enterprises in Kazakhstan's agro-processing sector, this suggests that indirect integration into export activity may depend not only on firm-level capabilities but also on access to external networks and the foreign-trade institutional environment.

The remaining variables are not statistically significant in the model. This suggests that broader export participation, including indirect involvement through intermediaries or supply chains, may be more strongly associated with structural factors such as ownership structure and institutional barriers than with internal managerial capabilities. The average marginal effects for this model are reported in Table 5.

Estimates of average marginal effects generally confirm the results of logistic regression for broader enterprise participation in export activities. The most significant effects were found for the share of foreign ownership (ME = 0.00071, p = 0.010) and customs restrictions (ME = 0.0438, p = 0.002). The variable reflecting the female gender of the top manager shows a positive, but only borderline significant effect (ME = 0.0377, p = 0.079).

Table 5. Average marginal effects for any export participation

Variable	Marginal Effect	Std. Error	p-value
Website	0.0309	0.0188	0.101
QualityCert	0.0019	0.0215	0.931
ProcessInnov	0.0096	0.0275	0.728
Training	−0.0320	0.0278	0.250
ManagerExp	−0.0019	0.0017	0.253
FemaleManager	0.0377	0.0214	0.079
ForeignOwn	0.00071	0.00027	0.010
LnEmp	0.0265	0.0217	0.222
TransportObstacle	0.0031	0.0106	0.772
CustomsObstacle	0.0438	0.0144	0.002

Note: Observations: 121. Survey weights: Yes (wmedian). Design-based standard errors: Yes. Region fixed effects: No.

The other variables did not show a statistically significant effect. Overall, the marginal effects analysis shows that export activity is shaped by both internal managerial and organizational factors and by external structural constraints. Direct export participation is more closely associated with digital presence, process innovation, and firm size, whereas broader export participation is more strongly associated with ownership structure and customs barriers. These findings are particularly relevant for enterprises in Kazakhstan's agro-processing sector, where export development depends both on internal organizational upgrading and on the institutional conditions of market access.

For a clearer comparison of the average marginal effects across the direct and overall export participation models, a comparative visualization is presented in Figure 2.

Figure 2 provides a generalized comparison of managerial, organizational, and structural factors across various forms of firms' export activity. This visualization shows that for direct participation in exports, the internal characteristics of the enterprise are more pronounced, primarily digital presence, process innovations, and enterprise size. Meanwhile, the share of foreign ownership and customs restrictions play a more prominent

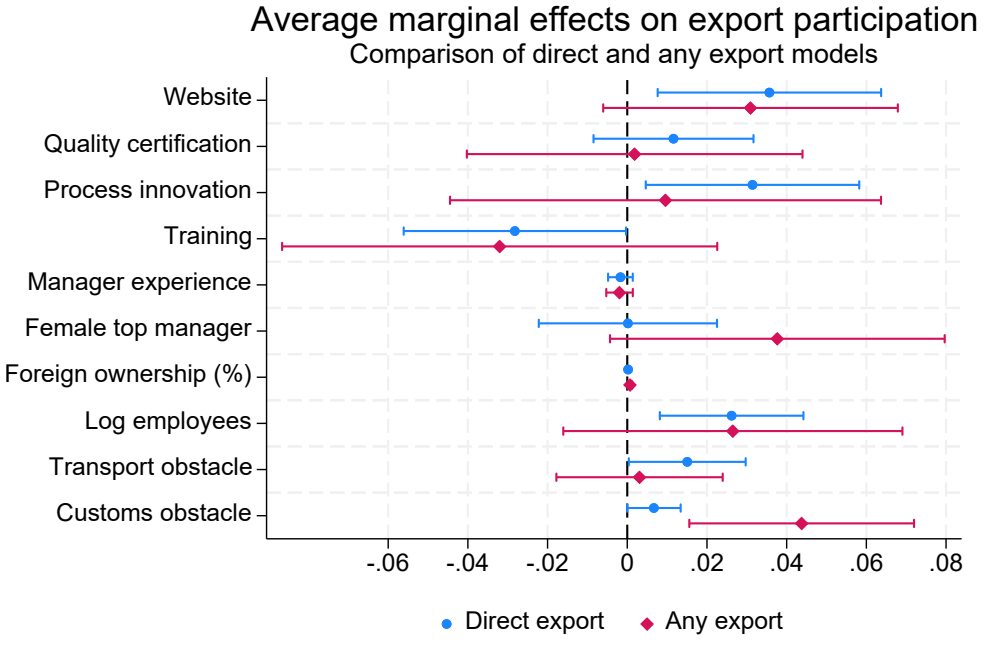

Figure 2. Average marginal effects for direct and overall export participation among agro-processing firms

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Table 6. Summary of hypothesis testing results

Hypothesis	Main empirical result	Decision
H1	Quality certification was insignificant in both the direct export model (β = 0.661, p = 0.297) and the any-export model (β = 0.047, p = 0.931).	Not supported
H2	Digital presence was positively associated with direct export participation (β = 2.030, p = 0.004).	Supported
H3a	Process innovation was positively associated with direct export participation (β = 1.789, p = 0.010).	Supported
H3b	Staff training showed a significant negative association with direct export participation (β = –1.606, p = 0.022), contrary to the hypothesized positive relationship.	Not supported
H4	Firm size was positively associated with direct export participation (β = 1.491, p = 0.001), but was insignificant in the any-export model (p = 0.221).	Partially supported
H5	Foreign ownership was positively associated with broader export participation (β = 0.018, p = 0.008).	Supported
H6	Transport and customs obstacles were significant in the direct export model, while only customs obstacles remained significant in the any-export model.	Partially supported

Note: Hypotheses were evaluated at the 5% significance level.

role in broader export participation, including indirect export involvement. At the same time, confidence intervals cross zero for several variables, indicating the absence of a statistically significant relationship in the corresponding models. Overall, the results support the study's purpose and show that enterprises' export activity is determined by a combination of internal managerial and organizational characteristics and external structural conditions and institutional constraints. For enterprises in Kazakhstan's agro-processing sector, this means that strengthening export activity requires not only production capacity but also internal organizational capabilities, digital tools, and consideration of the conditions of foreign trade interaction. Table 6 summarises the hypothesis-testing results based on the survey-weighted logistic regression estimates.

Overall, H2, H3a, and H5 were supported, whereas H1 and H3b were not supported. H4 and H6 were partially supported because their statistical significance varied across the two specifications of export participation.

4. DISCUSSION

The findings provide sector-specific firm-level evidence on the organizational and institutional factors associated with export participation among agro-processing firms in Kazakhstan. Direct export participation is more closely associated with internal organizational capabilities, particularly digital presence, process innovation, and firm size. Broader export participation is more strongly associated with foreign ownership and exposure to customs-related procedures. This conclusion is consistent with earlier research showing that firms' participation in international trade is largely determined by their internal characteristics, such as productivity, organizational capabilities, and management practices (Bernard & Jensen, 1999; Helpman et al., 2004; Wagner, 2007). This result is especially relevant for Kazakhstan's agro-processing industry, since converting productive potential into exports will depend on companies' ability to organize quality control, coordinate shipments, and respond to demands imposed by foreign customers.

The positive association between customs obstacles and export participation most likely reflects exposure rather than a beneficial effect of barriers. Firms involved in export activity are more likely to interact with customs procedures and therefore report them as obstacles. This result highlights the significance of interpreting institutional barriers as part of the export experience rather than as direct drivers of export participation.

One of the most important results of the study is the positive relationship between the company's digital presence and the likelihood of direct exports. A website can be considered an indicator of the company's openness, greatly simplifying the search for partners, product promotion, and the coordination of logistics. Similar conclusions are presented in studies on the role of management practices and organizational capabilities in

increasing firms' competitiveness in international markets (Bloom & Van Reenen, 2010; Helfat & Martin, 2015). In this context, a website may reflect not only digital visibility, but also a firm's readiness to communicate product specifications, certification information, and delivery conditions to potential international partners. *H1* is rejected, as international quality certification does not demonstrate a statistically significant association with either direct export participation or broader export participation.

Process innovations are also a vital factor in export activity. Enterprises that modernize production processes demonstrate a greater ability to adapt to international market requirements and to ensure stable product quality. This is particularly important for the agro-processing sector, where compliance with international product quality and safety standards is a key condition for access to foreign markets (Henson & Reardon, 2005; Santeramo & Lamonaca, 2019). In addition, enterprises' innovative activity contributes to increasing their competitiveness and expanding export opportunities (Cassiman & Golovko, 2011; Love & Roper, 2015). In the case of agro-processing firms, process innovation may be viewed as a way to improve product standardization, reduce uncertainties, and enhance quality and safety conformity in international export destinations.

The negative association between staff training and direct export participation should be interpreted cautiously. It may reflect that firms investing in training are still in a preparatory stage of organizational upgrading, while firms already exporting may rely more on established routines and accumulated operational experience. Therefore, this result does not imply that training reduces export readiness, but rather that the timing and purpose of training may differ across firms.

At the same time, some of the study's results appear less straightforward. In particular, the negative relationship between the availability of staff training programs and the likelihood of direct exports may be explained by the fact that enterprises actively investing in employee training may be undergoing internal restructuring and organizational upgrading. Such firms may therefore focus more on improving internal processes rather than immediately expanding into external markets. Thus, this finding does not suggest that training reduces export orientation; rather, it may indicate that training is more prevalent among firms that have not yet reached the stage where they can export. *H3* is partially supported. Process innovation is positively and significantly associated with direct export participation, whereas staff training demonstrates a negative and statistically significant association in the direct export model.

The lack of a statistically significant relationship for international quality certification may indicate that certification alone is insufficient for export participation unless combined with market access, logistics capacity, buyer networks, and digital communication. In the Kazakhstani context, certification may function more as a necessary but not sufficient condition for exporting.

H1 was rejected because quality certification was not significantly associated with either form of export participation. *H2* was supported because digital presence was positively associated with direct export participation. *H3a* was supported, whereas *H3b* was rejected in the expected direction. *H4* was supported for direct export participation. *H5* was supported for broader export participation. *H6* was partially supported because transport and customs-related obstacles were associated with direct export participation, while customs-related obstacles were also associated with broader export participation.

Several limitations should be acknowledged. First, the analysis is based on a relatively small sector-specific sample of food manufacturing establishments, which may limit the precision and stability of multivariable estimates. Second, the cross-sectional design does not permit causal interpretation. Third, export participation is measured using binary indicators and does not capture export intensity, destination markets, product composition, or export duration. Fourth, transport and customs-related variables reflect firms' subjective assessments and may be influenced by their prior exposure to international trade. Finally, the analytical sample represents the food manufacturing segment of the agro-processing sector and does not include primary agricultural producers, farms, or other parts of the broader agro-processing value chain.

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CONCLUSION

The purpose of this study is to identify managerial, organizational, and institutional factors associated with direct and broader export participation among agro-processing firms in Kazakhstan.

The findings indicate that digital presence, process innovation, and firm size are positively associated with direct export participation. These results suggest that agro-processing firms with stronger organizational capabilities and greater digital readiness are better positioned to enter foreign markets independently. Broader export participation is more strongly associated with foreign ownership and reported customs-related obstacles, highlighting the importance of external business networks and exposure to international trade procedures.

The results imply that export-support policies for Kazakhstan's agro-processing sector should extend beyond production expansion. Policy measures should also promote digital communication, process modernization, managerial development, quality-management capacity, access to foreign business networks, and improvements in customs and logistics procedures. However, the findings represent statistical associations rather than causal effects and should be interpreted in light of the limited sector-specific sample.

AUTHOR CONTRIBUTIONS

Conceptualization: Kuralay Nurgaliyeva, Akan Nurbatsin, Marat Urdabayev, Medet Konyrbekov, Peter Karácsony.
Data curation: Akan Nurbatsin.
Formal analysis: Akan Nurbatsin, Medet Konyrbekov.
Funding acquisition: Kuralay Nurgaliyeva.
Investigation: Peter Karácsony.
Methodology: Akan Nurbatsin, Marat Urdabayev.
Project administration: Kuralay Nurgaliyeva.
Resources: Kuralay Nurgaliyeva, Peter Karácsony.
Software: Marat Urdabayev.
Supervision: Kuralay Nurgaliyeva, Peter Karácsony.
Validation: Akan Nurbatsin, Marat Urdabayev, Medet Konyrbekov.
Visualization: Akan Nurbatsin, Medet Konyrbekov.
Writing – original draft: Kuralay Nurgaliyeva, Akan Nurbatsin, Marat Urdabayev, Medet Konyrbekov, Peter Karácsony.
Writing – review & editing: Kuralay Nurgaliyeva, Akan Nurbatsin, Marat Urdabayev, Medet Konyrbekov, Peter Karácsony.

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REFERENCES

1. Abildaev, S., Iskakova, G., & Shaldarbekov, K. (2023). Assessment of Kazakhstan's agricultural exports to China: State and prospects of development. *Economic Series of the Bulletin of L.N. Gumilyov ENU, 3,* 122-137. https://doi.org/10.32523/2789-4320-2023-3-122-137
2. Anderson, J. E., & van Wincoop, E. (2004). Trade costs. *Journal of Economic Literature, 42*(3), 691-751. https://doi.org/10.1257/0022051042177649
3. Arvis, J.-F., Ojala, L., Wiederer, C., Shepherd, B., Raj, A., Dairabayeva,

K., & Kiiski, T. (2018). *Connecting to Compete 2018: Trade Logistics in the Global Economy.* World Bank. Retrieved from https://openknowledge.worldbank.org/handle/10986/29971

4. Aw, B. Y., Roberts, M. J., & Xu, D. Y. (2011). R&D investment, exporting, and productivity dynamics. *American Economic Review, 101*(4), 1312-1344. https://doi.org/10.1257/AER.101.4.1312

5. Ayazbayeva, G., Symonenko, O., & Sudibor, O. (2024). Competitiveness of Kazakhstan's agrifood systems: Opportunities and growth factors. *International Journal on Food System Dynamics, 15*(3), 240-253. https://doi.org/10.18461/ijfsd.v15i3.K3

6. Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99-120. https://doi.org/10.1177/014920639101700108

7. Bernard, A. B., & Jensen, J. B. (1999). Exceptional exporter performance: Cause, effect, or both? *Journal of International Economics, 47*(1), 1-25. https://doi.org/10.1016/S0022-1996(98)00027-0

8. Bernard, A. B., Jensen, J. B., Redding, S. J., & Schott, P. K. (2007). Firms in international trade. *Journal of Economic Perspectives, 21*(3), 105-130. https://doi.org/10.1257/jep.21.3.105

9. Bloom, N., & Van Reenen, J. (2010). Why do management practices differ across firms and countries? *Journal of Economic Perspectives, 24*(1), 203-224. https://doi.org/10.2139/SSRN.1533440

10. Bobojonov, I., Teuber, R., Hasanov, S., Urutyan, V., & Glauben, T. (2016). Farmers' export market participation decisions in transition economies: A comparative study between Armenia and Uzbekistan. *Development Studies Research, 3*(1), 25-35. https://doi.org/10.1080/21665095.2016.1262272

11. Brooks, J., & Matthews, A. (2015). *Trade dimensions of food security* (OECD Food, Agriculture and Fisheries Papers, No. 77). Paris: OECD Publishing. https://doi.org/10.1787/5js65xn790nv-en

12. Cassiman, B., & Golovko, E.N. (2011). Innovation and internationalization through exports. *Journal of International Business Studies, 42*(1), 56-75. https://doi.org/10.1057/JIBS.2010.36

13. Cheptea, A., Emlinger, C., & Latouche, K. (2015). Multinational retailers and home country food exports. *American Journal of Agricultural Economics, 97*(1), 159-179. https://doi.org/10.1093/ajae/aau017

14. Djankov, S., Freund, C., & Pham, C. S. (2010). Trading on time. *Review of Economics and Statistics, 92*(1), 166-173. https://doi.org/10.1162/rest.2009.11498

15. Esenaliev, D. (2023). Welfare effects of smallholder export participation: Evidence from panel data in Kyrgyzstan. *The Journal of Development Studies, 59*(9), 1373-1390. https://doi.org/10.1080/00220388.2023.2204180

16. Greenaway, D., Guariglia, A., & Kneller, R. (2007). Financial factors and exporting decisions. *Journal of International Economics, 73*(2), 377-395. https://doi.org/10.1016/j.jinteco.2007.04.002

17. Helfat, C., & Martin, J. (2015). Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. *Journal of Management, 41*(5), 1281-1312. https://doi.org/10.1177/0149206314561301

18. Helpman, E., Melitz, M.J., & Yeaple, S.R. (2004). Export versus FDI with heterogeneous firms. *The American Economic Review, 94*(1), 300-316. https://doi.org/10.1257/000282804322970814

19. Henson, S., & Reardon, T. (2005). Private agri-food standards: Implications for food policy and the agri-food system. *Food Policy, 30*(3), 241-253. https://doi.org/10.1016/j.foodpol.2005.05.002

20. Hummels, D., & Schaur, G. (2013). Time as a trade barrier. *American Economic Review, 103*(7), 2935-2959. https://doi.org/10.1257/aer.103.7.2935

21. International Trade Administration. (2026, March 9). *Kazakhstan – agricultural sector*. U.S. Department of Commerce. Retrieved from https://www.trade.gov/country-commercial-guides/kazakhstan-agricultural-sector

22. Kafouros, M., Buckley, P. J., Sharp, J. A., & Wang, C. (2008). The role of internationalization in explaining innovation performance. *Technovation, 28*(1-2), 63-74. https://doi.org/10.1016/j.technovation.2007.07.009

23. Konyrbekov, M. Zh. (2015). Study of the growth characteristics of the livestock sector of Kazakhstan in market conditions. *Actual Problems in Economics, 7,* 79-87. Retrieved from http://nbuv.gov.ua/UJRN/ape_2015_7_12

24. Liapis, P. (2011). *Changing patterns of trade in processed agricultural products* (OECD Food, Agriculture and Fisheries Papers No. 47). Paris: OECD Publishing. https://doi.org/10.1787/5kgc3mq19s6d-en

25. Love, J. H., & Roper, S. (2015). SME innovation, exporting and growth: A review of existing evidence. *International Small Business Journal, 33*(1), 28-48. https://doi.org/10.1177/0266242614550190

26. Manatovna, T. A., Dabyltayeva, N. E., Ruziyeva, E. A., Sakhanova, G., & Yelubayeva, Z. M. (2023). Unlocking intersectoral integration in Kazakhstan's agro-industrial complex: Technological innovations, knowledge transfer, and value chain governance as predictors. *Economies, 11*(8), Article 211. https://doi.org/10.3390/economies11080211

27. Melitz, M. J. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity. *Econometrica, 71*(6), 1695-1725. https://doi.org/10.1111/1468-0262.00467

28. OECD. (2024). *Diversifying Kazakhstan's exports: Institutions, policies, infrastructures*. Paris: OECD Publishing. https://doi.org/10.1787/7f9cd8aa-en

29. Penkova, O., & Kharenko, A. (2023). Transformation of market-

http://dx.doi.org/10.21511/ppm.24(3).2026.33

ing logistics for the export of Ukrainian crop production in the context of a full-scale war with the Russian Federation. *Scientific Bulletin of Mukachevo State University. Series "Economics", 10*(1), 37-48. https://doi.org/10.52566/msu-econ1.2023.037

30. QazTrade. (2025, August 19). *Kazakhstan's agricultural exports increased by almost 40%*. QazTrade Trade Policy Development Center. Retrieved from https://qaztrade.org.kz/eng/kazakhstans-agricultural-exports-increased-by-almost-40/

31. Roberts, M. J., & Tybout, J. R. (1997). The decision to export in Colombia: An empirical model of entry with sunk costs. *The American Economic Review, 87*(4), 545-564. Retrieved from https://documents1.worldbank.org/curated/en/653161468770512259/pdf/multi0page.pdf

32. Samoilyk, I., & Zhaivoron, D. (2023). The transformation of the agri-food products export channels from Ukraine: New opportunities and challenges. *Engineering Proceedings, 40*(1), Article 13. https://doi.org/10.3390/engproc2023040013

33. Santeramo, F. G., & Lamonaca, E. (2019). The effects of non-tariff measures on agri-food trade: A review and meta-analysis of empirical evidence. *Journal of Agricultural Economics, 70*(3), 595-617. https://doi.org/10.1111/1477-9552.12316

34. Smagulov, A., Baimbetova, A., & Sheikh, A. (2025). Digitalization of food logistics in Kazakhstan in new economic conditions. *Economic Series of the Bulletin of L.N. Gumilyov ENU, 2,* 26-44. https://doi.org/10.32523/2789-4320-2025-2-26-44

35. Wagner, J. (2007). Exports and productivity: A survey of the evidence from firm level data. *The World Economy, 30*(1), 60-82. https://doi.org/10.1111/J.1467-9701.2007.00872.X