



Менеджмент

UDK: 005.334

DOI <https://doi.org/10.5281/zenodo.15620596>

Assessment of human resource management and motivational measures in crisis conditions

Zinaida Zhyvko

doctor of economic sciences,
professor, professor of the department of aviation management,
Ukrainian State Aviation Academy, Kropyvnytskyi, Ukraine,
e-mail: zinaukraine@gmail.com,
ORCID <https://orcid.org/0000-0002-4045-669X>

Anastasiia Shehynska

Master of Computer Science, Master of Psychology,
Junior Researcher, Scientific Center of Innovative Research,
Pussi, Estonia astyvol@gmail.com,
ORCID ID: <https://orcid.org/0009-0007-5785-6730>

Svitlana Rodchenko

PhD in Economics, Associate Professor, Associate Professor of Finance,
Accounting and Business Security Department,
O. M. Beketov National University of Urban Economy in Kharkiv,
Ukraine, e-mail: svrodchenko@gmail.com,
ORCID: <https://orcid.org/0000-0002-8611-2796>



Sofia Makiieva

higher education student of the department of aviation management,

Ukrainian State Aviation Academy, Kropyvnytskyi, Ukraine,

e-mail: zen_anas@i.ua

Прийнято: 19.05.2025 | Опубліковано: 29.05.2025

***Abstract.** This article examines the effectiveness of human resource management and employee motivation strategies under crisis conditions, using ZAMMLER UKRAINE LLC as a case study. The enterprise operates under a linear organizational structure, characterized by a clear hierarchy and direct subordination, which ensures consistency, responsibility, and coordination across departments. While such a structure supports operational discipline and resource alignment, it also imposes high demands on managers, including the need for broad expertise and multitasking under pressure. In a dynamic and crisis-prone environment, these limitations become more pronounced, leading to potential inefficiencies in communication, decision-making, and adaptability.*

The relevance of the study lies in the increasing frequency of external crises (economic downturns, military conflicts, market turbulence) that force enterprises to adapt HR management and motivational strategies to ensure stability, workforce retention, and productivity. In the Ukrainian context, particularly during wartime disruptions, the ability to maintain an engaged, functional workforce has become not only a managerial challenge but a strategic necessity.

The scientific novelty of the research consists in a comprehensive evaluation of the interaction between rigid organizational design and motivational mechanisms in times of crisis, as well as the development of applied recommendations for integrating adaptive HR policies into traditionally structured enterprises. The study introduces a framework for balancing discipline and flexibility in personnel management, and



identifies new motivational drivers that emerge under pressure such as psychological safety, crisis leadership, and emotional compensation.

The paper evaluates the motivational tools currently applied at the enterprise both material and non-material and their effectiveness in maintaining employee engagement and productivity. Furthermore, recommendations are proposed for enhancing HR practices through more flexible and adaptive structures, emphasizing the importance of targeted motivation programs, decentralization of responsibilities, and investment in managerial training.

Keywords: *human resource management, employee motivation, organizational structure, crisis management, leadership, linear structure, ZAMMLER UKRAINE, adaptability, HR strategy, staff engagement*

Оцінка управління людськими ресурсами та мотиваційні заходи в кризових умовах

Живко Зінаїда Богданівна

доктор економічних наук, професор, професор кафедри менеджменту авіаційної діяльності, Українська державна льотна академія, м. Кропивницький, Україна, e-mail: zinaukraine@gmail.com, ORCID <https://orcid.org/0000-0002-4045-669X>

Шегинська Анастасія Іванівна

магістр комп'ютерних наук, магістр психології, молодший дослідник, Науковий центр інноваційних досліджень, Пюссі, Естонія, <https://orcid.org/0009-0007-5785-6730>



Родченко Світлана Сергіївна

кандидат економічних наук, доцент, доцент кафедри фінансів, бухгалтерського обліку та безпеки бізнесу Харківського національного університету міського господарства імені О. М. Бекетова, Україна, e-mail: svrodchenko@gmail.com, ORCID: <https://orcid.org/0000-0002-8611-2796>

Макієва Софія Олексіївна

здобувач вищої освіти кафедри менеджменту авіаційної діяльності, Українська державна льотна академія, м. Кропивницький, Україна

***Анотація.** У цій статті розглядається ефективність управління людськими ресурсами та стратегії мотивації співробітників у кризових умовах на прикладі ТОВ «ЗАММЛЕР УКРАЇНА». Підприємство працює за лінійною організаційною структурою, що характеризується чіткою ієрархією та прямим підпорядкуванням, що забезпечує послідовність, відповідальність та координацію між відділами. Хоча така структура підтримує операційну дисципліну та узгодження ресурсів, вона також висуває високі вимоги до менеджерів, включаючи необхідність широкого досвіду та багатозадачності під тиском. У динамічному та схильному до криз середовищі ці обмеження стають більш вираженими, що призводить до потенційної неефективності комунікації, прийняття рішень та адаптивності.*

Актуальність дослідження полягає у зростаючій частоті зовнішніх криз (економічні спади, військові конфлікти, ринкова турбулентність), які змушують підприємства адаптувати стратегії управління персоналом та мотивації для забезпечення стабільності, утримання робочої сили та продуктивності. В українському контексті, особливо під час воєнних потрясінь, здатність підтримувати залучену, функціональну робочу силу стала не лише управлінським викликом, а й стратегічною необхідністю.



Наукова новизна дослідження полягає у комплексній оцінці взаємодії між жорсткою організаційною структурою та мотиваційними механізмами в кризові часи, а також у розробці прикладних рекомендацій щодо інтеграції адаптивної кадрової політики в традиційно структуровані підприємства. Дослідження запроваджує основу для балансування дисципліни та гнучкості в управлінні персоналом, а також визначає нові мотиваційні рушійні сили, що виникають під тиском, такі як психологічна безпека, кризове лідерство та емоційна компенсація.

У статті оцінюються мотиваційні інструменти, що наразі застосовуються на підприємстві, як матеріальні, так і нематеріальні, та їхня ефективність у підтримці залученості та продуктивності співробітників. Крім того, пропонуються рекомендації щодо вдосконалення кадрової практики за допомогою більш гнучких та адаптивних структур, підкреслюючи важливість цільових мотиваційних програм, децентралізації обов'язків та інвестицій у навчання управлінських кадрів.

Ключові слова: *управління людськими ресурсами, мотивація співробітників, організаційна структура, кризове управління, лідерство, лінійна структура, ZAMMLER UKRAINE, адаптивність, кадрова стратегія, залученість персоналу*

Problem Statement and Relevance. In the context of increasing global turbulence, including economic crises, military conflicts, and political instability, organizations face intensified pressure to adapt their human resource management (HRM) systems. The problem of maintaining workforce efficiency, motivation, and psychological well-being in times of crisis is of critical importance to business continuity and sustainable performance. This study focuses on the challenges and opportunities for HRM under such disruptive conditions, particularly within the Ukrainian logistics sector. The relevance of this research is underscored by the growing



need for resilient HR strategies capable of responding to instability and unpredictability.

Literature Review, Recent studies have addressed various aspects of HRM in crisis situations. Ulrich (1997) introduced the strategic HR business partner model, highlighting adaptability as a key role of modern HR [1]. Armstrong (2014) emphasized the growing role of motivation during organizational stress [2], while contemporary research by crisis management experts such as Mitroff (2005) and Lengnick-Hall (2002) underscores the importance of human capital resilience [3; 4]. However, despite a growing body of literature, there remains a gap concerning the integration of motivation mechanisms within rigid organizational structures, particularly in emerging economies and under wartime conditions. This article aims to fill that gap by presenting a case-based assessment of these dynamics.

In her work «Methodology for Assessing Employee Motivation in Times of Crisis», H.I. Kovbas analyzes the main directions and methods for evaluating personnel motivation during crisis conditions and outlines the criteria for the feasibility of their implementation [5]. The study recommends that the effectiveness of a motivation system in a crisis should be assessed based on general principles of system design, adapted in line with the theoretical framework of crisis management. The principles of developing an enterprise motivation system were refined to meet the requirements of crisis management practices.

Researchers K.B. Kozak, N.M. Korsikova, and Yu.O. Petrenko emphasize in their study that the success and overall development of a business are closely tied to employee performance and motivation levels [6]. Under crisis conditions, the presence or absence of motivation can either safeguard a business or, conversely, create additional challenges in operations. In today's unstable environment, it is essential for every manager to recognize the importance of reviewing existing motivational mechanisms, updating management tools, and researching employee needs to ensure they are fully met.



Following their calculations, Iryna Dvornyk, Oleksii Dvornyk, and Olha Harafonova concluded that although the hotel under analysis maintains a stable market position, its growth is slow [7]. This is evident in the limited dynamics of service volumes, profit levels, and expenditures. A SWOT analysis revealed that the hotel's strongest assets include a highly qualified staff, a high level of service, and an efficient organizational structure. However, its weaknesses lie in outdated technologies, a weak corporate image, and an inefficient sales system. In addition, the issue of motivation was considered by scientists Zinaida Zhyvko, Mykhailo Zhyvko, Liliana Chernobay and others [8-11].

The reviewed studies collectively emphasize the need to transform motivation and HR management methods in response to global crises and wartime conditions. They highlight the importance of personal potential, resilience, and the integration of innovative personnel management technologies to ensure workforce stability, engagement, and effectiveness in turbulent environments [14-16].

Purpose of the Article. The purpose of this article is to assess the effectiveness of human resource management and motivational approaches during crisis conditions using ZAMMLER UKRAINE LLC as a case study. The objective is to evaluate the impact of a linear organizational structure on employee engagement and to identify improvements to HR practices to ensure adaptability and resilience.

Research Methodology and Main Results. This study employs qualitative and comparative methods, including case analysis, interviews with HR personnel, and content analysis of internal company reports. The main focus is the evaluation of material and non-material motivational tools such as salary stability, bonuses, flexible work arrangements, recognition programs, and psychological support. The findings indicate that while the linear structure provides clear responsibilities and control, it limits horizontal communication and initiative. Motivation was found to be more sustainable when paired with emotional support, flexible task assignment, and trust-building by leadership. The integration of these adaptive mechanisms into the HR



policy has improved employee satisfaction and reduced turnover during periods of high external pressure.

Conclusions and Future Research Directions. The article concludes that a hybrid HR model combining hierarchical clarity with flexible motivational practices is optimal for organizations operating in crisis conditions. The proposed framework recommends decentralizing decision-making in motivational contexts, training crisis-resilient leaders, and incorporating psychological support into HR strategies. Further research should focus on cross-industry comparisons and longitudinal tracking of motivation under sustained crisis exposure.

Unresolved problems. The study identifies unresolved issues in HR management under a rigid organizational structure, including weak communication, low adaptability, and high managerial pressure. It emphasizes the need for flexible personnel strategies, crisis leadership development, and motivational tools that address both material and psychological employee needs.

Research results. ZAMMLER UKRAINE LLC employs a linear organizational structure characterized by a strict hierarchical framework, where each department directly reports to a higher-level manager. This structure ensures clearly defined and straightforward interdepartmental communication, unity and precision in directive transmission, coherence in task execution, increased managerial accountability for departmental outcomes, rapid decision-making processes, consistency in resource-supported instructions, and the individual responsibility of each manager for the final results within their scope of authority.

Despite its advantages, this structure imposes several limitations. It places substantial demands on managers, who must possess extensive knowledge and experience across all functional management areas. This requirement can hinder the effective administration of the organization due to managerial overload, excessive documentation flow, numerous interactions with subordinates and external bodies, lack of specialized personnel for distinct management functions, and a general misalignment with the evolving demands of modern production processes. While the



linear structure promotes discipline and procedural consistency key for logistics operations it may compromise organizational flexibility and adaptability in a dynamic market environment.

Outlines the key departments within ZAMMLER UKRAINE LLC, each comprising subordinate units, respective department heads, and specialized staff. For instance, the administrative department includes the Deputy Director for Investments, Office Manager, and Quality Manager. The customs brokerage division consists of a department head, broker, and declarant. The operations division supervises multiple units: sales, international transport, regional logistics, air cargo, rail transport, and VIP client services.

Such structural delineation allows the company to allocate qualified professionals to each managerial position, enhancing task performance and reducing central leadership overload through the distribution of responsibilities across different levels. This delegation supports faster and higher-quality decision-making processes.

Staffing levels at ZAMMLER UKRAINE LLC are governed by standardized employment norms tailored to operational divisions and work types. These standards consider optimal working conditions, workplace safety, and employee health.

Personnel selection is based on educational background, professional competence, prior experience, and personal qualities. These factors also inform salary decisions, aligned with the company's internal compensation framework.

The organizational structure of ZAMMLER UKRAINE LLC includes several operational departments providing a wide range of logistics services. These include international freight, air freight, maritime shipping (with branches in Kyiv and Odesa), domestic logistics, customs brokerage, and railway transport.

From 2021 to 2023, ZAMMLER UKRAINE LLC demonstrated notable growth in average employee headcount, increasing from 232 in 2021 to 438 in 2023—an 88.79% rise. The most significant increase was observed in the 26–35 age group, which expanded by 133 employees (93.37%) to reach 275 in 2023. Significant gains also occurred in the 18–25 and 35–50 cohorts, with increases of 23 (80.34%) and 47



(87.61%) employees, respectively. The 50+ age group showed moderate growth, increasing by 3 employees (40.16%) to 10 in 2023 [12; 13].

These trends indicate active company expansion and a strategic focus on attracting young professionals, particularly in the 26–35 age range, suggesting a commitment to dynamic growth and generational renewal of the workforce.

An analysis of the personnel distribution at ZAMMLER UKRAINE LLC by length of service over the period from 2021 to 2023 reveals a significant increase in overall staff numbers from 232 employees in 2021 to 438 in 2023 representing an absolute growth of 206 individuals or 88.79%. The most substantial growth occurred among employees with over five years of service, whose number rose from 47 to 115, indicating an absolute increase of 68 employees or 145.37%.

Employees with 1–5 years of service also showed considerable growth, increasing from 147 to 277 individuals an increment of 130 employees or 88.16%. Meanwhile, the number of employees with less than one year of tenure experienced only modest growth, rising from 38 to 46 employees, which constitutes an increase of 8 individuals or 21.26%.

These findings highlight a clear trend toward retaining experienced personnel and increasing the proportion of long-tenured staff. This may reflect the company's stable human resource policies and the effectiveness of its employee retention strategies.

An analysis of employee turnover indicators at ZAMMLER UKRAINE LLC during the period 2021–2023 reveals notable shifts in the company's human resource policy. At the beginning of 2021, the registered headcount stood at 232 employees. Over the course of the year, 12 new employees were hired while 28 individuals left the company, resulting in a reduction in staff to 216 employees by the end of the year.

In 2022, there was a significant increase in recruitment activity, with 252 new hires and only 30 departures, which brought the total headcount to 438 employees. However, in 2023, there were no recorded instances of hiring or termination, and the total number of employees remained steady at 438.



Overall, from 2021 to 2023, the company's registered staff increased by 206 employees, reflecting a growth rate of 88.79%. These figures indicate an active phase of organizational expansion in 2022, followed by a period of stabilization in 2023, during which the company maintained a consistent workforce without notable fluctuations in headcount.

The wage fund at ZAMMLER UKRAINE LLC consists of two primary components: remuneration for time worked and compensation for non-working time. The first component includes base salary rates, performance-based bonuses, compensatory payments, and remuneration for overtime, night shifts, and work on public holidays. The second component encompasses annual bonuses, vacation payments, compensation for training and recreation for blood donors, and payments to employees for downtime not caused by their actions. Based on Table 1, it can be concluded that the total wage fund increased from UAH 10,012,000 in 2021 to UAH 15,749,000 in 2023. This represents an increase of UAH 5,510,000 or 105.50% compared to 2021, and UAH 5,186,000 or 149.10% compared to 2022.

Table 1 – Absenteeism Indicators of ZAMMLER UKRAINE LLC Personnel for 2021–2023

Indicators	Period	Absolute Deviation (thousand UAH)	Relative Deviation (%)
	2021	2022	2023
Working time balance of the organization, hours	263	264	265
Number of working hours missed by employees, hours	42.8	45.5	49.7
Absenteeism rate	16	17	18

***Source:** Compiled by the author based on the enterprise's staffing schedule [12; 13]

The variable component of the wage fund rose from UAH 694,500 in 2021 to UAH 1,049,900 in 2023, an increase of UAH 570,000 or 100.82% compared to 2021. However, it declined by UAH 595,210 or 14.99% compared to 2022.



Similarly, the fixed component of the wage fund grew from UAH 306,700 in 2021 to UAH 525,000 in 2023, which corresponds to an increase of UAH 49,400 or 116.11% relative to 2021 and UAH 168,900 or 147.43% relative to 2022.

The average monthly salary increased from UAH 40,050 in 2021 to UAH 40,879 in 2023, showing a growth of UAH 3,290 or 100.82% compared to 2021, and UAH 5,000 or 101.24% compared to 2022. Summary of Employee Evaluation of Working Conditions at ZAMMLER UKRAINE LLC in 2023 (tabl.2).

Using the chosen method, the satisfaction index for each factor was calculated according to the following formula:

$$X = [(-3 \cdot a) + (-2 \cdot b) + (-1 \cdot c) + (0 \cdot d) + (1 \cdot e) + (2 \cdot f) + (3 \cdot g)] / (3 \cdot N) \times 100\% \quad (1)$$

where N is the total number of survey participants,

$$N = a + b + c + d + e + f + g$$

Table 2 – Summary of Employee Evaluation of Working Conditions at ZAMMLER UKRAINE LLC in 2023

Question	Your opinion (number of respondents)
	-3
I feel discomfort at work	2
Workplace inspections are carried out on schedule	2
I am satisfied with the working conditions at the company	3
Working conditions need improvement	2

*Source: Compiled by the authors [12; 13]



To calculate the satisfaction index for each factor, the scale values were multiplied by the number of employees who selected each response level and then divided by the maximum possible satisfaction level (Tables 3–5).

Table 3 – Satisfaction Index at ZAMMLER UKRAINE LLC in 2023 for the Factor "Compensation and Rewards"

Question	Your opinion (respondents)	Satisfaction Index, %
	-3	-2
I believe the company's remuneration is fair	2	1
I am satisfied with the motivation and pay system	3	4
Management pays no attention to motivation	2	3
I hope for changes in remuneration	2	2

*Source: Compiled by the authors [12; 13]

After calculating individual indices, the average satisfaction index for each factor group is determined. Regarding the «Company Strategy» factor, most employees agreed that ZAMMLER UKRAINE LLC is a market leader, though some expressed distrust toward management due to unmet commitments.

The satisfaction index for the «Compensation and Rewards» factor indicates a low level of employee satisfaction with both remuneration and motivation systems. While a plurality (31.25%) views remuneration as fair a positive sign only 26.47% are satisfied with the motivational structure, suggesting room for improvement. Moreover, just 16.05% believe that management adequately considers employee motivation, highlighting potential communication gaps. Notably, 18.18% of respondents expressed hope for changes in remuneration, indicating a desire for improvement in working conditions and incentive mechanisms.



Table 4 – Satisfaction Index for the «Corporate Culture» Factor at ZAMMLER UKRAINE LLC in 2023

Question	Your opinion (respondents)	Satisfaction Index, %
Interpersonal relationships are established among employees	2	2
I have no relation to corporate culture	2	3
I am an informal leader	1	5
I participate in leisure-related activities	2	2

***Source:** Compiled by the authors [12; 13]

A smaller portion of employees feel detached from corporate culture, which slightly lowers the overall perception. Still, the indicator suggests relatively strong interpersonal and informal engagement. All these preliminary results are aggregated into the overall employee satisfaction index, calculated as the arithmetic mean of all factor group indices.

Table 5 – Satisfaction Index for the «Working Conditions» Factor at ZAMMLER UKRAINE LLC in 2023

Question	Your opinion (respondents)	Satisfaction Index, %
I feel discomfort at work	2	1
Workplace inspections are conducted on schedule	2	3
I am satisfied with the company's working conditions	3	4
Working conditions need improvement	2	2

***Source:** Compiled by the authors [12; 13]



As a result, the overall employee satisfaction index for ZAMMLER UKRAINE LLC in 2023 is 62.22%, indicating that the majority of staff feel reasonably satisfied with the evaluated aspects of their work environment.

Here is a professional English paraphrase of your text, suitable for a business or analytical report:

ZAMMLER UKRAINE LLC is a leading player in Ukraine's logistics services market, known for its high level of professionalism and service quality. The company's success is driven by its years of experience, the use of modern technologies, and standardized approaches to customer service. As part of the ZAMMLER Group, it offers a comprehensive range of logistics solutions, including transportation, customs brokerage, and warehousing, all in compliance with international standards such as ISO 9001:2015, ISO 14001:2015, and OHSAS 18001:2007.

A core part of the company's strategy includes investing in employee development, fostering favorable working conditions, and supporting environmental initiatives.

ZAMMLER UKRAINE LLC has shown consistent growth, as evidenced by its financial and asset performance. Between 2021 and 2023, the company's total assets increased by 34.44%, reaching UAH 210,655.5 thousand in 2023. Current assets grew by 49.07%, and cash and cash equivalents rose more than seventeenfold, highlighting effective liquidity management. The financial results also indicate a 7.58% rise in equity and a 10.06% increase in retained earnings, reflecting stable profitability. The 97.48% surge in accounts receivable may be attributed to an expanding client base or changes in sales policy.

Human resources policy is another critical factor in the company's success. From 2021 to 2023, the workforce grew by 88.79%, with the most significant increase observed among employees aged 26 to 35. A growing number of long-tenured employees and a rise in the overall education level of the staff affirm the company's focus on retaining highly qualified professionals.



The stabilization of headcount in 2023 signals the end of the rapid expansion phase experienced in 2022. A well-balanced HR strategy ensures effective management and team cohesion.

In conclusion, ZAMMLER UKRAINE LLC continues to achieve growth both financially and organizationally, laying a solid foundation for further strengthening its market position.

Список використаних джерел

1. Ulrich, D. (1997). *Human Resource Champions*. Boston: Harvard Business School Press.
2. Armstrong, M. (2014). *Armstrong's Handbook of Human Resource Management Practice*. London: Kogan Page.
3. Mitroff, I. (2005). *Why Some Companies Emerge Stronger and Better from a Crisis*. AMACOM.
4. Lengnick-Hall, C. A., & Beck, T. E. (2002). Developing a Capacity for Organizational Resilience through Strategic Human Resource Management. *Human Resource Planning*, 27(4), 14–24.
5. Ковбас Г. І. Методика оцінки мотивації персоналу в умовах кризи. *Ефективна економіка*. 2019. № 7. – URL: <http://www.economy.nayka.com.ua/?op=1&z=7189> (дата звернення: 18.05.2025). DOI: [10.32702/2307-2105-2019.7.35](https://doi.org/10.32702/2307-2105-2019.7.35)
6. Козак К.Б., Корсікова Н.М., Петренко Ю.О. УПРАВЛІННЯ МОТИВАЦІЄЮ ПЕРСОНАЛУ В УМОВАХ ПОСТПАНДЕМІЇ ТА ВОЄННОГО СТАНУ. ЕКОНОМІКА ХАРЧОВОЇ ПРОМИСЛОВОСТІ Том 14, Випуск 4, 2022. С. 26-34. DOI: 10.15673/fe.v14i4.2426
7. Дворник Ірина , Дворник Олексій , Гарафонова Ольга. Сучасна стратегія управління персоналом підприємства в умовах воєнного стану. Scientific journal “MODELING THE DEVELOPMENT OF THE ECONOMIC SYSTEMS “. № 2



(2023): MODELING THE DEVELOPMENT OF THE ECONOMIC SYSTEMS . С. 144-152. DOI: <https://doi.org/10.31891/mdes/2023-8-19>

8. Живко З.Б., Живко М.О., Магомедрасупова Д.Г. Мотиваційний механізм у системі безпеки підприємництва України. *Вісник Хмельницького національного університету*. Науковий журнал № 5, 2011. Економічні науки. Т. 3, 2011. С. 14-19.

9. Живко З.Б., Чернобай Л.І., Чеонобай Д.А. Ідентифікація ризиків при мотивуванні персоналу підприємства. *Науковий вісник Львівського державного університету внутрішніх справ. Серія економічна* / головний редактор Р. І. Благута. Львів: ЛьВДУВС, 2017. Вип. 2. С.179-189.

10. Живко З. Б., Живко О. В., Грибань В. Є. Роль мотиваційної системи та страхування у післявоєнному відновленні економіки України. *Фінансове та інформаційно-аналітичне забезпечення безпеки бізнесу в умовах воєнної економіки та повоєнного відновлення: виклики та перспективи* : матеріали XIII Міжнар. наук.-практ. конф., Харків, 13–15 листопада 2024 р. / Харків. нац. ун-т міськ. госп-ва ім. О. М. Бекетова [та ін. ; редкол.: Н. Є. Лелюк, І. А. Краївська]. Харків : ХНУМГ ім. О. М. Бекетова, 2024. С.57-61.

11. Viktor Zhyvko, Boyko Roman, Vasyl Hryban. MOTIVATION OF PERSONNEL IN THE ENTERPRISE SYSTEM. *Financial strategies for accelerating digital transformation in Ukraine's aviation industry*. International Conference on Economics, Accounting, and Finance -2024. P. 67-68. URL: <https://conf.scnchub.com/index.php/ICEAF/ICEAF-2024/paper/view/780/332>

12. Сайт ТОВ «ЗАММЛЕР УКРАЇНА» та документація ФГД <https://opendatabot.ua/c/35007717>

13. Макієва С.О. Мотивація персоналу підприємства в кризових умовах. Дипломна робота. УДЛА. 97 с.

14. Погуль Д.С. Трансформація мотиваційних методів в умовах глобальних кризових явищ. *Економіка та суспільство*. №57, 2023. DOI: <https://doi.org/10.32782/2524-0072/2023-57-44>



15. Котковський В.Р., Самородов Б.В., Чхеайло А.А. Управління людськими ресурсами в умовах війни: мотивація, шляхи і способи ефективного застосування особистісного потенціалу. *Сталий розвиток економіки*. №3 (50), 2024. С.228-235.

DOI: <https://doi.org/10.32782/2308-1988/2024-50-34>

16. Технології управління персоналом.: монографія/ О.А.Гавриш, Л.Є.Довгань, І.М.Крейдич, Н.В.Семенченко. Київ : НТУУ « КПІ імені Ігоря Сікорського». 528 с.