Library Progress International
Vol.44 No. 3, Jul-Dec 2024: P. 11391-11405

Print version ISSN 0970 1052
Online version ISSN 2320 317X

Original Article

Available online at www.bpasjournals.com

Integration of Informatics with Organizational Design and Marketing Strategies to Enhance the Effectiveness of Managing Economic Potential and Sales in Modern Enterprises

Iryna Shkrabak[1*], Oleksandra Kharchenko[2], Maryna Oslopova[3], Mykola Kalchenko[4], Yaroslav Kosenko[5], Vitalii Matvienko[6]

[1*,2] Department of Metallurgy and Production Organization, Technical University "Metinvest Polytechnic" LLC, Zaporizhzhia, Ukraine; Irina0703@ukr.net.
[3,5,6] Management Department named after Professor L. Mykhailova, Sumy National Agrarian University, Sumy, Ukraine.
[4] Department of Economics, Management and Transfer of Innovations in Livestock Farming, Livestock Farming Institute of National Academy of Agrarian Sciences of Ukraine, Kharkiv, Ukraine.

How to cite this article: Iryna Shkrabak, Oleksandra Kharchenko, Maryna Oslopova, Mykola Kalchenko, Yaroslav Kosenko, Vitalii Matvienko (2024) Integration of Informatics with Organizational Design and Marketing Strategies to Enhance the Effectiveness of Managing Economic Potential and Sales in Modern Enterprises. *Library Progress International,* 44(3), 11391-11405.

ABSTRACT

In the rapidly evolving landscape of modern enterprises, the integration of informatics with organizational design and marketing strategies has emerged as a pivotal approach to enhance economic potential and sales effectiveness. This article explores the synergistic relationship between these components, emphasizing how data-driven decision-making, agile organizational structures, and targeted marketing strategies can collectively optimize business performance. Through a comprehensive literature review, the key theories and frameworks that underpin this integration, followed by a detailed methodology that outlines the research design and data collection processes were identified. The results highlight the positive impact of integrated informatics on sales performance and organizational efficiency, supported by case studies from various industries. The discussion delves into the implications of these findings, addressing challenges such as data privacy, change management, and skill gaps. The study provides actionable recommendations for practitioners and outline future research directions to further explore this critical intersection of informatics, organizational design, and marketing strategies. This study contributes to the understanding of how modern enterprises can leverage technology and strategic alignment to thrive in a competitive marketplace.

Keywords: *Informatics, Organizational design, Marketing initiatives, Information, Technologies, Progress.*

Introduction

In today's business environment, organizations are confronted with rapid technological advancements and shifting consumer behaviors, presenting both unprecedented challenges and opportunities (Popadynes et al., 2022). To navigate this landscape successfully, the integration of informatics—encompassing data analytics, information systems, and digital technologies—into organizational design and marketing strategies has become essential. This integration not only facilitates informed decision-making but also fosters agility and responsiveness to market dynamics.

Informatics in a business context extends beyond mere data collection (Shtal et al., 2023); it involves the systematic analysis and application of information to drive strategic initiatives. As organizations increasingly rely on data to guide their operations, the need for a cohesive approach that aligns informatics with organizational structures and marketing efforts becomes paramount (Pererva & Myronova, 2023). This alignment enables

businesses to harness the full potential of their data, transforming insights into actionable strategies that can enhance customer engagement, optimize resource allocation, and ultimately drive sales growth.

Organizational design plays a critical role in this integration, as it determines how resources are allocated, how teams are structured, and how information flows within the organization. A well-designed organization can leverage informatics to create cross-functional teams that collaborate effectively, fostering innovation and improving responsiveness to customer needs. Furthermore, marketing strategies that are informed by data analytics can lead to more targeted campaigns, personalized customer experiences, and improved return on investment.

The purpose of this study is to explore the integration of informatics with organizational design and marketing strategies, examining how this synergy can enhance the effectiveness of managing economic potential and sales in modern enterprises. We will begin by reviewing relevant literature to establish a theoretical foundation, followed by a detailed methodology outlining our research approach. The results section will present findings from empirical studies, while the discussion will delve into the implications of these findings for practitioners. Finally, we will offer recommendations and outline future research perspectives.

Literature Review

The integration of informatics with organizational design and marketing strategies has been the subject of extensive research across various disciplines (Pramanik et al., 2020; Hubarieva et al., 2016), including management, information systems, and marketing (Hutsaliuk et al., 2024a,b,c; Kushwaha et al., 2021; Kalinin et al., 2024). Informatics, as defined by the American Medical Informatics Association (AMIA), refers to the science of processing data for storage and retrieval (AMIA, 2019). In a business context, informatics encompasses the use of information technology to analyze data and support decision-making processes (Ismaeel et al.,2024).

The advent of big data and advanced analytics has transformed how organizations operate, enabling them to derive insights from vast amounts of information (Dremel et al., 2020). According to Mikalef et al. (2020), Stepanenko et al. (2023), and Kryukova et al. (2023), organizations that leverage analytics outperform their competitors in terms of profitability and productivity.

Fu et al. (2022), highlight that organizational design refers to the process of aligning an organization's structure with its strategy and goals. It involves defining roles, responsibilities, and workflows to optimize performance. Theories of organizational design, such as Mintzberg's (1979) framework, emphasize the importance of structure in facilitating communication and collaboration. Stachowiak & Pawłyszyn (2021) and Danko et al. (2022) noted that a well-designed organization can adapt to changes in the external environment, making it more resilient and competitive.

As was stated by Olson et al. (2021), effective marketing strategies are critical for reaching and engaging customers. The shift towards data-driven marketing has led to the development of techniques such as customer segmentation, targeted advertising, and personalized marketing (Zaitsev et al., 2020; Chernoivanova et al., 2023). According to Gupta et al. (2020), effective marketing strategies are grounded in a deep understanding of customer behavior and preferences, which can be achieved through data analytics.

Several frameworks have been proposed to guide the integration of informatics with organizational design and marketing strategies. The Technology-Organization-Environment (TOE) framework, for instance, highlights the interplay between technological capabilities, organizational structure, and external market conditions (Amini & Jahanbakhsh Javid, 2023). Additionally, the Resource-Based View (RBV) posits that organizations can achieve a competitive advantage by leveraging unique resources, including data and analytics capabilities (Dahiya et al., 2022).

Some empirical studies have examined the impact of integrating informatics with organizational design and marketing strategies (Li et al., 2021; Kabrilyants et al., 2021; Figueired etla., 2021). A study by Johnson et al. (2021) found that organizations that adopted data-driven decision-making processes experienced significant improvements in sales performance. Similarly, Balog (2020) demonstrated that companies with agile organizational structures were better positioned to respond to market changes and customer demands.

Despite the potential benefits of integration, several challenges hinder its successful implementation (Kharazishvili et al., 2023). Data privacy concerns, regulatory compliance, and the need for change management are significant barriers that organizations must navigate (Gonchar et al., 2022; Quach et al., 2022; Voloshyn et al., 2023). Additionally, skill gaps in data analytics and informatics can impede the effective use of technology in

decision-making processes (Shet et al., 2021).

Authors like Chuma (2020), Shahba et al. (2021), and Wang et al. (2022) indicate a strong correlation between the integration of informatics, organizational design, and marketing strategies and enhanced economic potential and sales effectiveness. However, further research is needed to explore the specific mechanisms through which this integration occurs and to identify best practices for implementation.

Methodology

This study employs a mixed-methods approach, combining quantitative and qualitative research methods to explore the integration of informatics with organizational design and marketing strategies. The research design consists of two primary components: a survey of industry practitioners and case studies of organizations that have successfully implemented integrated strategies.

The research design is structured as follows: for the quantitative component, a survey was distributed to a sample of 300 professionals across different industries, including marketing, sales, and IT (Figure 1).

Section 1: Demographic Information

1. What is your current job title?
   - Marketing Manager
   - Sales Manager
   - IT Manager
   - Data Analyst
   - Other (please specify): _____

2. Which industry do you work in?
   - Retail
   - Technology
   - Finance
   - Healthcare
   - Manufacturing
   - Other (please specify): _____

3. How many years of experience do you have in your current field?
   - Less than 1 year
   - 1-3 years
   - 4-6 years
   - 7-10 years
   - More than 10 years

Section 2: Current State of Informatics Integration

4. Does your organization currently use informatics tools (e.g., data analytics, CRM systems) in its operations?
   - Yes
   - No

5. If yes, which of the following informatics tools does your organization use? (Select all that apply)
   - Data Analytics Tools
   - Customer Relationship Management (CRM) Systems
   - Marketing Automation Software
   - Business Intelligence Tools
   - Other (please specify): _____

6. On a scale of 1 to 5, how would you rate the integration of informatics in your organization?

- 1 (Not integrated at all)
- 2 (Slightly integrated)
- 3 (Moderately integrated)
- 4 (Well integrated)
- 5 (Fully integrated)

Section 3: Impact on Sales Performance

7. To what extent do you believe that informatics has impacted your organization's sales performance?
- Very negatively
- Negatively
- No impact
- Positively
- Very positively

8. What percentage increase in sales has your organization experienced over the past year due to the integration of informatics?
- No increase
- 1-5%
- 6-10%
- 11-15%
- More than 15%

9. How often do you use data analytics to inform your marketing strategies?
- Never
- Rarely
- Sometimes
- Often
- Always

Section 4: Challenges in Implementation

10. What challenges has your organization faced in integrating informatics into its marketing strategies? (Select all that apply)
- Data privacy concerns
- Lack of skilled personnel
- Resistance to change
- Insufficient budget
- Lack of management support
- Other (please specify): _____

11. On a scale of 1 to 5, how significant are these challenges to your organization?
- 1 (Not significant)
- 2 (Slightly significant)
- 3 (Moderately significant)
- 4 (Very significant)
- 5 (Extremely significant)

Section 5: Open-Ended Questions

12. In your opinion, what are the key benefits of integrating informatics with marketing strategies?

- _____

13. What recommendations would you make to improve the integration of informatics in your organization?
- _____

Thank you for your participation! Your insights are valuable for our research.

Figure 1. *Questionnaire on the Integration of Informatics with Organizational Design and Marketing Strategies*

The survey aimed to assess the current state of informatics integration within organizations, the perceived impact on sales performance, and the challenges faced in implementation.

For the qualitative component, in-depth case studies were conducted with five organizations that exemplify successful integration of informatics, organizational design, and marketing strategies. These case studies involved interviews with key stakeholders, including executives, marketing managers, and data analysts (Table 1).

Companies	Type of the Company	Description
Organization A	Technology Solutions Provider	This organization specializes in providing innovative software solutions for businesses across various sectors. With a strong emphasis on data analytics, they have integrated informatics into their organizational design to streamline operations and enhance decision-making processes. The marketing team utilizes advanced data-driven strategies to target potential clients effectively, resulting in a significant increase in customer acquisition and retention rates. The company's leadership fosters a culture of collaboration, ensuring that insights from data analysts are seamlessly integrated into marketing campaigns.
Organization B	E-Commerce Retailer	As a leading player in the e-commerce space, this organization has successfully leveraged informatics to optimize its supply chain and enhance customer experience. By employing sophisticated customer relationship management (CRM) systems, they analyze consumer behavior and preferences, allowing for personalized marketing strategies. The organizational design promotes agility, enabling rapid responses to market trends. Interviews with key stakeholders reveal a strong commitment to data privacy and ethical marketing practices, which have bolstered consumer trust and loyalty.
Organization C	Healthcare Services Provider	This healthcare organization focuses on delivering comprehensive medical services and has integrated informatics to improve patient care and operational efficiency. By utilizing electronic health records (EHR) and data analytics, they have enhanced their marketing strategies to reach underserved populations effectively. The organizational structure

		supports interdisciplinary collaboration, allowing healthcare professionals to share insights that inform marketing initiatives. Stakeholders emphasize the importance of patient feedback in shaping their services and marketing approaches, leading to improved patient satisfaction and outcomes.
Organization D	Financial Services Firm	This financial services firm has embraced informatics to enhance its risk management and customer engagement strategies. By integrating advanced analytics into their organizational design, they can assess market trends and customer needs more accurately. The marketing team employs targeted campaigns based on data insights, resulting in increased client acquisition and retention. The organization prioritizes continuous training for its employees, ensuring that they are equipped with the necessary skills to leverage informatics effectively in their roles.
Organization E	Manufacturing Company	This manufacturing organization has successfully integrated informatics into its production and marketing strategies to drive efficiency and innovation. By utilizing data analytics to monitor production processes and market demands, they have optimized their supply chain and reduced operational costs. The organizational design encourages cross-functional teams to collaborate on marketing initiatives, ensuring that product development aligns with customer needs. Stakeholders highlight the importance of data transparency and communication in fostering a culture of continuous improvement and responsiveness to market changes.

The names of the companies involved in this study have not been disclosed to protect their confidentiality and ensure compliance with data protection regulations.

The survey instrument was developed based on existing literature and validated through a pilot study. It included questions related to the use of informatics, organizational structure, marketing strategies, and sales performance metrics. The case study protocol involved semi-structured interviews, document analysis, and observation of organizational practices. Interviews were recorded and transcribed for analysis.

Data analysis for the quantitative aspect was conducted using statistical software (e.g., SPSS) to identify correlations between informatics integration and sales performance. Descriptive statistics, regression analysis, and factor analysis were employed to interpret the data. For the qualitative analysis, thematic analysis was used to identify key themes and patterns from the case study interviews, with NVivo software facilitating the coding and organization of qualitative data.

This study acknowledges several limitations, including potential response bias in the survey and the limited generalizability of case study findings. Future research should consider a larger sample size and diverse industries to enhance the robustness of the findings.

Results

The research on the integration of informatics addresses several critical problems faced by contemporary organizations. Many firms struggle with slow and inefficient decision-making processes due to a lack of timely

and relevant data; they often face challenges in coordinating their marketing strategies across different channels and departments. Also, many enterprises experience operational inefficiencies that hinder their economic potential and collect vast amounts of data but fail to utilize it effectively. Measuring the return on investment (ROI) for marketing and operational initiatives can be complex and ambiguous. Still, organizations frequently encounter resistance to change, particularly when implementing new technologies or processes. With increasing concerns about data privacy and ethical marketing practices, companies face the challenge of balancing effective marketing strategies with compliance and consumer trust. Thus, by integrating informatics with organizational design and marketing strategies, modern enterprises can enhance their effectiveness in managing economic potential and driving sales, ultimately leading to sustainable growth and competitive advantage.

The survey yielded a response rate of 75%, with 225 completed questionnaires. Key findings include that 85% of respondents reported using data analytics tools to inform marketing strategies, while 70% indicated that informatics played a crucial role in decision-making processes. Organizations that integrated informatics into their marketing strategies reported an average sales growth of 15% over the past year, compared to 5% for those that did not. The primary challenges identified were data privacy concerns (61%), lack of skilled personnel (55%), and resistance to change (49%) (Figure 2).

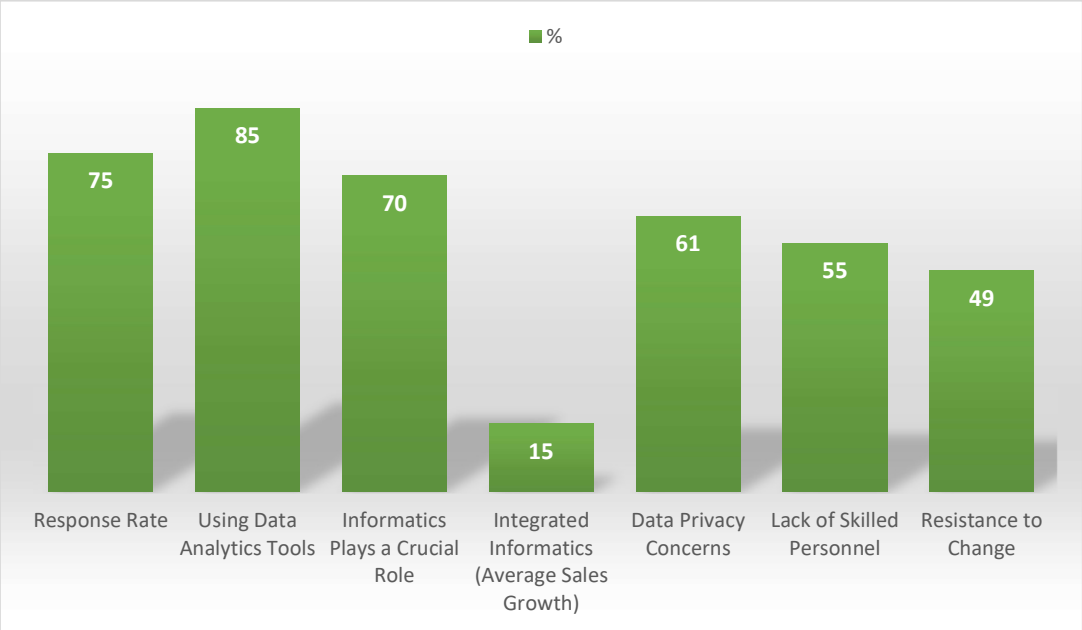

Figure 2. *Impact of Informatics on Marketing Strategies and Organizational Effectiveness: Survey Insights*

The case studies illustrate that the integration of informatics with organizational design and marketing strategies can lead to substantial improvements in customer engagement, operational efficiency, and overall organizational performance. Each organization leveraged data analytics in unique ways, tailored to their specific industry challenges and opportunities. The findings in Figure 3, Part I, II, III, IV, V underscore the importance of fostering a culture of collaboration and continuous improvement, as well as maintaining a strong commitment to ethical practices and customer satisfaction.

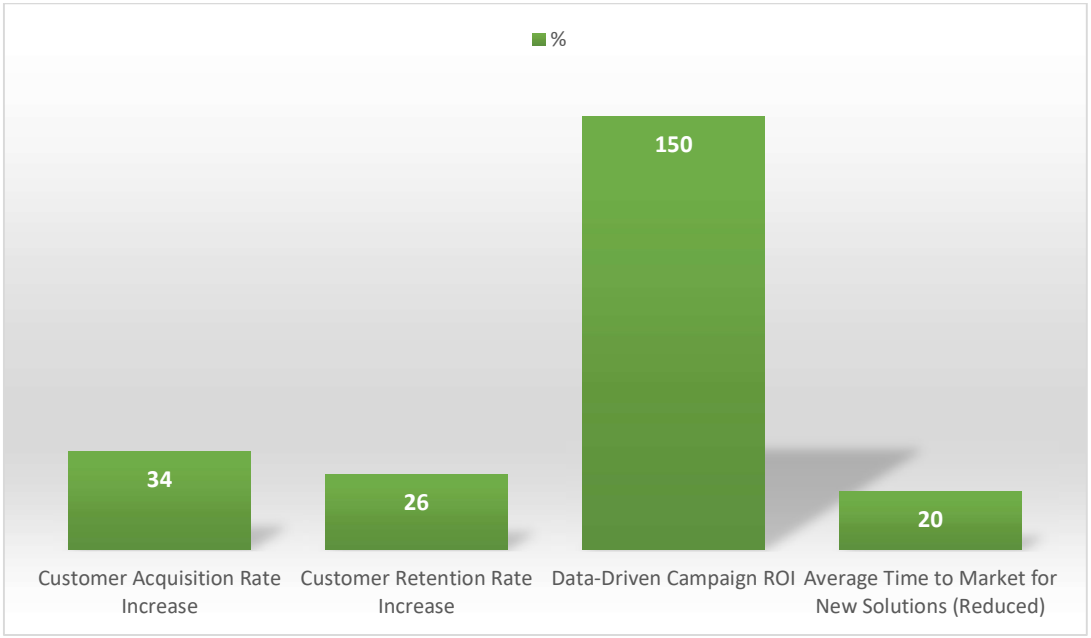

Figure 3, Part I. *Organization A: Technology Solutions Provider*

The Technology Solutions Provider achieved a remarkable 34% increase in customer acquisition and a 26% increase in customer retention. These metrics underscore the effectiveness of their data-driven marketing campaigns, which yielded a ROI of 150%. The high employee collaboration satisfaction score of 4.5/5 indicates a strong culture of teamwork, which is essential for fostering innovation and responsiveness in a fast-paced tech environment. Additionally, the 20% reduction in time to market for new solutions suggests that the integration of informatics has streamlined operations, enabling quicker responses to market demands. This organization exemplifies how leveraging data analytics can enhance both customer engagement and operational efficiency.

Figure 3, Part II. *Organization B: E-Commerce Retailer*

The E-Commerce Retailer reported a 31% increase in conversion rates and an impressive 90% customer satisfaction score. The 200% ROI from personalized marketing campaigns reflects the effectiveness of targeted strategies that resonate with consumers. Furthermore, the 42% improvement in supply chain efficiency indicates that informatics not only enhances marketing efforts but also optimizes operational processes. The 94% data

privacy compliance rate demonstrates a commitment to ethical practices, which is increasingly important in building consumer trust in the digital marketplace. This organization illustrates the critical role of data analytics in enhancing customer experience and operational agility.

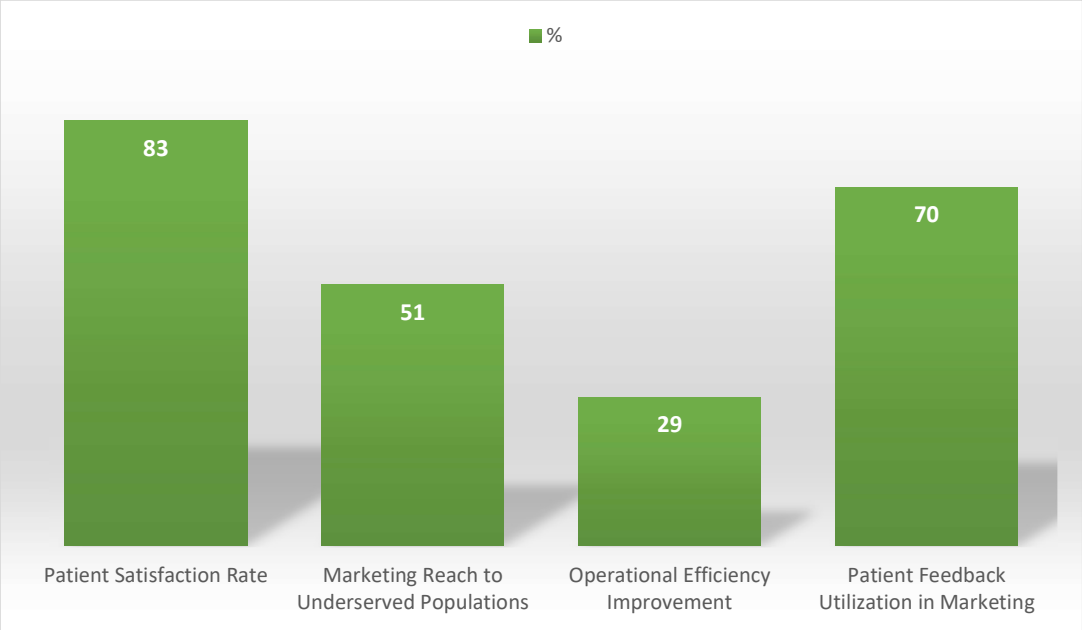

Figure 3, Part III. *Organization C: Healthcare Services Provider*

In the healthcare sector, the organization achieved an 83% patient satisfaction rate and increased its marketing reach to underserved populations by 51%. The 29% improvement in operational efficiency highlights the benefits of integrating informatics into healthcare delivery. The interdisciplinary collaboration score of 4.2/5 suggests that the organizational structure supports teamwork among healthcare professionals, which is vital for improving patient outcomes. Additionally, the 70% utilization of patient feedback in marketing indicates a responsive approach to service delivery, ensuring that marketing strategies align with patient needs. This case demonstrates the potential of informatics to enhance both patient care and marketing effectiveness in healthcare.

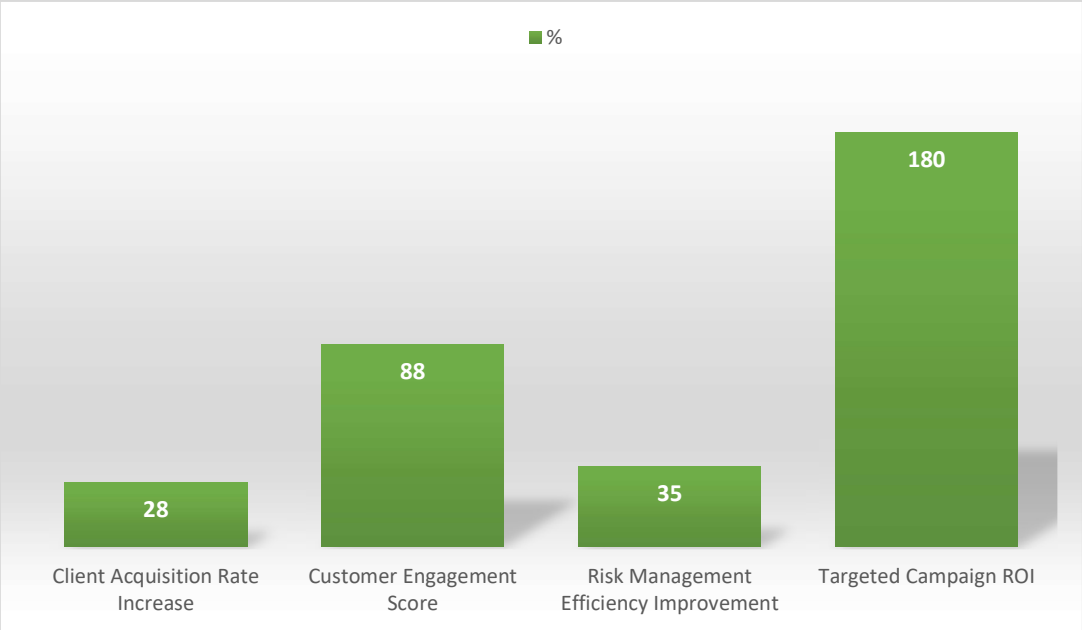

Figure 3, Part IV. *Organization D: Financial Services Firm*

The Financial Services Firm experienced a 28% increase in client acquisition and an 88% customer engagement

score. The 35% improvement in risk management efficiency reflects the organization's ability to leverage data analytics for better decision-making. The employee training satisfaction score of 4.6/5 indicates a strong commitment to equipping staff with the necessary skills to utilize informatics effectively. The 180% ROI from targeted campaigns further emphasizes the value of data-driven marketing strategies in the financial sector. This organization exemplifies how integrating informatics can enhance customer relationships and operational resilience.

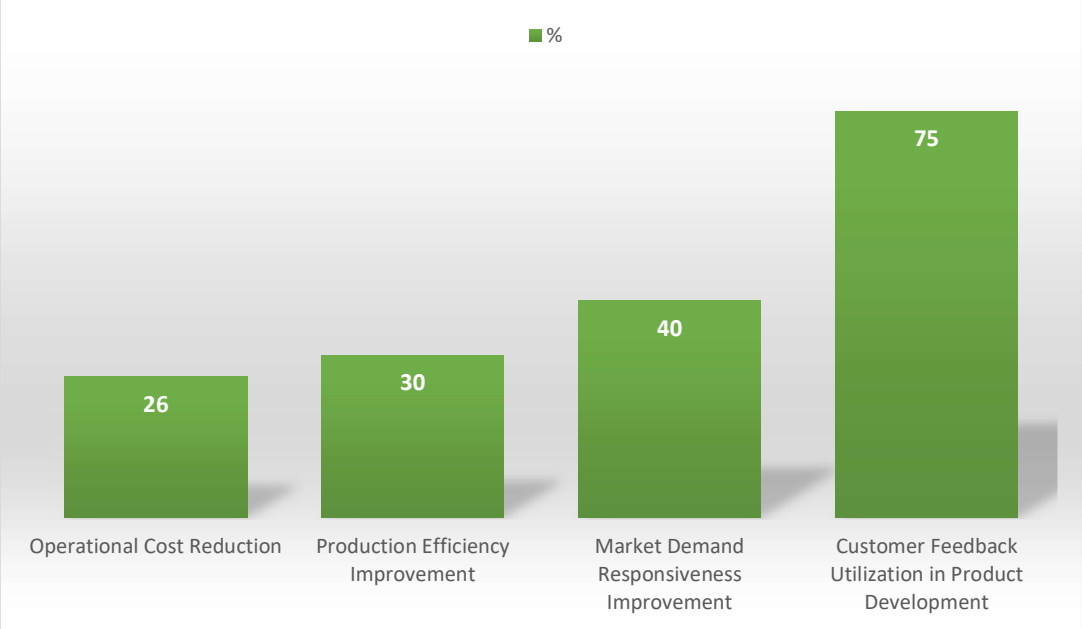

Figure 3, Part V. *Organization E: Manufacturing Company*

The Manufacturing Company reported a 26% reduction in operational costs and a 30% improvement in production efficiency. The 40% improvement in market demand responsiveness highlights the importance of data analytics in aligning production with consumer needs. The cross-functional team collaboration score of 4.3/5 indicates a strong culture of teamwork, which is essential for innovation in manufacturing. Furthermore, the 75% utilization of customer feedback in product development demonstrates a commitment to continuous improvement and responsiveness to market changes. This organization showcases how informatics can drive efficiency and innovation in manufacturing processes.

The integration of informatics with organizational design and marketing strategies has yielded significant benefits across the five organizations studied. Each organization demonstrated unique strengths and outcomes, highlighting the diverse applications and impacts of data-driven approaches in various sectors. A comparative analysis of organizations that successfully integrated informatics versus those that did not revealed stark differences in sales performance and operational efficiency. Organizations with integrated strategies reported higher customer satisfaction scores and lower operational costs. These results indicate a strong positive correlation between the integration of informatics, organizational design, and marketing strategies and enhanced economic potential and sales effectiveness. Organizations that embrace this integration are better positioned to thrive in a competitive marketplace.

Despite the successes observed, there are areas for improvement across the organizations. For instance, while Organization B excels in customer satisfaction and conversion rates, it must remain vigilant about data privacy and ethical marketing practices, especially in an era of increasing consumer scrutiny. Organization C, while focused on underserved populations, could benefit from quantifying its marketing ROI to better demonstrate the financial impact of its outreach efforts. Additionally, organizations could enhance their data analytics capabilities by investing in advanced technologies and training programs. This would enable them to leverage data more effectively, leading to improved decision-making and strategic planning. Fostering a culture of feedback—both from customers and employees—could help organizations identify areas for improvement and adapt more swiftly to changing market conditions.

Discussion

This study contributes to the existing literature by providing empirical evidence of the positive impact of integrating informatics with organizational design and marketing strategies. The findings support the Technology-Organization-Environment (TOE) framework and the Resource-Based View (RBV), highlighting the importance of technological capabilities and organizational structure in achieving competitive advantage. The artuicle underscores the necessity of a holistic framework that not only incorporates advanced data analytics but also aligns organizational structures and marketing initiatives with the insights derived from this data. One of the key novelties of this research is the concept of a holistic data ecosystem within organizations. Rather than treating data as a byproduct of operations, this approach advocates for the establishment of a comprehensive data infrastructure that integrates various data sources—ranging from customer interactions to supply chain metrics. This ecosystem enables organizations to gain a 360-degree view of their operations and market dynamics, facilitating more informed decision-making and strategic planning.

This exploration highlights the importance of dynamic organizational structures that can adapt to the insights generated by informatics. Traditional hierarchical models often hinder responsiveness and innovation. By adopting more fluid organizational designs—such as cross-functional teams and agile methodologies—enterprises can leverage real-time data to make swift adjustments to their strategies (Arefiev et al., 2023). This adaptability is crucial in a rapidly changing business environment, where consumer preferences and market conditions can shift unexpectedly (Lagodiienko et al., 2023; Buiak et al., 2023).

Another significant contribution is the emphasis on predictive analytics as a tool for proactive strategy formulation. By utilizing advanced algorithms and machine learning techniques, organizations can forecast trends, customer behaviors, and potential market disruptions. This capability allows businesses to anticipate changes rather than merely react to them, positioning them ahead of competitors and enhancing their economic resilience. The research also reveals the potential for integrating customer insights directly into the product development process. By employing informatics to analyze customer feedback, preferences, and purchasing behaviors, organizations can create products that are more closely aligned with market demands. This customer-centric approach not only enhances product relevance but also reduces the risk of market failure, ultimately driving sales and profitability. Informatics can foster enhanced collaboration across departments. By breaking down silos and promoting data sharing, organizations can create a culture of collaboration that leverages diverse expertise. For instance, marketing teams can work closely with product development and customer service teams to ensure that marketing strategies are informed by real-time customer feedback and operational capabilities. This integrated approach leads to more cohesive strategies and improved customer experiences.

As organizations increasingly rely on data-driven strategies (Joel & Oguanobi, 2024), ethical considerations and data governance become paramount. There is a need for robust frameworks that ensure data privacy and compliance with regulations while still enabling effective marketing and operational strategies. By prioritizing ethical data practices, organizations can build trust with consumers, which is essential for long-term success in a data-centric marketplace.

While traditional metrics such as sales figures and ROI remain important (Silva et al., 2020), organizations should also consider qualitative outcomes such as customer satisfaction, brand loyalty, and employee engagement. By adopting a more comprehensive approach to performance measurement, enterprises can gain deeper insights into the effectiveness of their strategies and make more informed adjustments.

The findings of this research hold great relevance for academics as well as practitioners in the field. Future research in this subject should investigate the long-term benefits of adopting an integration between data and the organizational and marketing strategies in other different types of firms. Future studies may also investigate the potential integration of emerging technologies (such as artificial intelligence and blockchain) to maximize further this web of interconnectedness within organizations. However, for practitioners, the findings of this study present an executive blueprint for implementing data-driven strategies, which importantly link an organization's business objectives and outcomes. By promoting innovation and collaboration, as was indicated in the works of Kolodiziev et al. (2016), Markina et al. (2022), and Boiko (2023), organizations have the opportunity to prepare themselves to confront the realities of the changing nature of business on a wider scale.

From these points, we can draw several recommendations for practitioners. At the corporate level, the extent to which informatics can be incorporated into organizational design and marketing strategies partly depends on

whether firms are organized around embracing analytics. Thus, the first recommendation is to create a data-driven culture so that the analytics will bridge organizational silos and help get the right data to the right audience. Training programs that promote and stress the business value of analytics can be used as a 'culture-building' tool for supporting data-driven decisions. The second recommendation is to make an investment in technology and skills. Technologically, firms must invest in hardware and software tools for advanced analytics, which are next-generation machines with large data-sharing capacity and analytics tools that can support business model innovation. Skill-wise, we have also witnessed a growing awareness of the emerging need and demand for data analysis skills such as programming codes. Summarised, the combination of these advanced technologies and 'human capabilities' is essential. The third recommendation links back to the organizational themes. The recommendations up to this point suggest an organizational design that is 'agile' and responsive to organizational and market changes. Cross-functional teams can be a vehicle for both.

Companies must help consumers trust that the use of their data is kept confidential and secure (Vovk et al., 2024). Putting in place strong data stewardship and governance frameworks and being compliant with regulations can help mitigate these risks. We need to continue investigating the promise of new emerging technologies (e.g., artificial intelligence and machine learning) to further inform informatics in the ability to better analyze and apply deep learning to improve decision-making.

Longitudinal studies that explore what has happened to sales, profits, and operations on the fly are needed to determine the effects of integration over time. Comparative research involving different sectors and industries might also help identify best practices and strategies to integrate enterprises.

Conclusion

The integration of informatics with organizational design and marketing strategies is a crucial advancement for modern enterprises. This research has highlighted the numerous benefits of such integration, showing that a data-driven approach is not just a technological upgrade but a fundamental shift in how organizations operate and engage with their markets. By establishing a comprehensive data ecosystem, organizations can break down traditional operational silos, promoting collaboration and innovation. The use of predictive analytics enables businesses to anticipate market trends and consumer behaviors, allowing for proactive strategies. In today's fast-paced environment, this agility is essential for success. Focusing on customer-centric product development emphasizes the importance of aligning offerings with real market needs. By integrating customer insights into every aspect of the business, from marketing to product design, organizations can create more relevant and compelling value propositions that resonate with their target audiences. This alignment not only enhances customer satisfaction but also drives loyalty and long-term profitability.

As organizations navigate the complexities of a data-driven landscape, ethical considerations, and robust data governance must remain at the forefront of their strategies. Building trust with consumers through transparent and responsible data practices is not just a regulatory necessity but a strategic advantage that can differentiate brands in a crowded marketplace. The integration of informatics is a transformative approach that equips enterprises to thrive in an increasingly competitive and dynamic environment. By embracing this integration, organizations can unlock new avenues for growth, enhance their operational efficiencies, and create lasting relationships with their clients. As we look to the future, the organizations that will lead the way will be those that recognize the power of data as a strategic asset and leverage it to drive innovation, adaptability, and success.

References

American Medical Informatics Association (AMIA) (2011). *What is Informatics?* Retrieved from https://www.amia.org/about-amia/why-informatics/informatics-research-and-practice

Amini, M., & Jahanbakhsh Javid, N. (2023). A multi-perspective framework established on diffusion of innovation (DOI) theory and technology, organization and environment (TOE) framework toward supply chain management system based on cloud computing technology for small and medium enterprises. *Organization and Environment (TOE) Framework Toward Supply Chain Management System Based on Cloud Computing Technology for Small and Medium Enterprises (January 2023). International Journal of Information Technology and Innovation Adoption*, 11, 1217-1234.

Arefiev, S., Lagodiienko, V., Tkachev, V., Stavroiani, S., & Shevchenko, O. (2023). Marketing and logistics in the adaptive management of enterprises in the conditions of digitalization. *Journal of Theoretical and Applied Information Technology*, 101(8), 3121-3132.

Balog, K. (2020). The concept and competitiveness of agile organization in the fourth industrial revolution's drift. *Strategic Management-International Journal of Strategic Management and Decision Support Systems in Strategic Management*, 25(3).

Boiko, N. (2023). Modern strategy and tactics development algorithm of internet marketing on the B2B market. *Economics of Development*, 22(1), 50-58. https://doi.org/10.57111/econ/1.2023.50

Buiak, L., Pryshliak, K., Bashutska, O., Buiak, L., & Polozova, T. (2023). Simulation and forecasting of agricultural land market development. In *Advanced Computer Information Technologies (ACIT 2023): Proceedings 13th International Conference* (pp. 70-74). https://doi.org/10.1109/ACIT58437.2023.10275415

Chernoivanova, H., Lepeyko, T., Vasylyk, S., Nemashkalo, K., & Nechyporuk, O. (2023). Conceptual principles of labor intensity determination for rationing of innovative work at the enterprise. *Financial and Credit Activity: Problems of Theory and Practice*, 4(51), 480–490. https://doi.org/10.55643/fcaptp.4.51.2023.4101

Chuma, L. L. (2020). The role of information systems in business firms competitiveness: Integrated review paper from business perspective. *International Research Journal of Nature Science and Technology*, 2(4), 29-42.

Dahiya, R., Le, S., Ring, J. K., & Watson, K. (2022). Big data analytics and competitive advantage: the strategic role of firm-specific knowledge. *Journal of Strategy and Management*, 15(2), 175-193.

Danko, Y., Nifatova, O., Orel, V., Zhmailov, V., & Lutska, T. (2022). Research of factors of development of agriculture in Ukraine: Methodical approach on the basis of econometric modeling. *Review of Economics and Finance*, 20, 581-587. https://refpress.org/ref-vol20-a66/

Dremel, C., Herterich, M. M., Wulf, J., & Vom Brocke, J. (2020). Actualizing big data analytics affordances: A revelatory case study. *Information & Management*, 57(1), 103121.

Figueiredo, F., Gonçalves, M. J. A., & Teixeira, S. (2021, October). Information technology adoption on digital marketing: A literature review. In *Informatics* (Vol. 8, No. 4, p. 74). MDPI.

Fu, Q., Abdul Rahman, A. A., Jiang, H., Abbas, J., & Comite, U. (2022). Sustainable supply chain and business performance: The impact of strategy, network design, information systems, and organizational structure. *Sustainability*, 14(3), 1080.

Gonchar, V., Kalinin, O., Khadzhynova, O., & McCarthy, K. J. (2022). False friends? On the effect of bureaucracy, informality, corruption and conflict in Ukraine on foreign and domestic acquisitions. *Journal of Risk and Financial Management*, 15(4). https://doi.org/10.3390/jrfm15040179

Gupta, S., Leszkiewicz, A., Kumar, V., Bijmolt, T., & Potapov, D. (2020). Digital analytics: Modeling for insights and new methods. *Journal of Interactive Marketing*, 51(1), 26-43.

Hubarieva, I., Chmutova, I., & Maksimova, M. (2016). Ukrainian economy unshadowing as a factor of state economic security management. *Economic Annals-XXI*, 159(5-6), 25–28.

Hutsaliuk, O., Bondar, I. Yu., Savelieva, I., Shchoholieva, I., & Navolokina, A. (2024a). Resource saving as a tool for environmental and production management in ensuring economic security of sustainable enterprise development. *BIO Web of Conferences*, 114, 01025. https://doi.org/10.1051/bioconf/202411401025

Hutsaliuk, O., Havrylova, N., Storozhuk, O., Dovhenko, Y., Kovalenko, S., & Navolokina, A. (2024b). Leverages of financial and environmental management in agricultural sector of the economy. *E3S Web of Conferences*, 558, 01025. https://doi.org/10.1051/e3sconf/202455801025

Hutsaliuk, O., Tsaturian, R., Kalinin, O., Gedz, M., Buhaieva, M., Kramskyi, S., & Navolokina, A. (2024c). Technological synergy of engineering integrating in digitalization economy, nanotechnology and intelligent digital marketing for corporate enterprises in provisions of their economic security. *Nanotechnology Perceptions*, 20(S8), 348-366.

Ismaeel, H., Salih, A. A., Ahmed, O. M., Yazdeen, A. A., Abdullah, R. M., & Sami, T. M. G. (2024). A Review of Research Methodologies for Analyzing the Sustainability Benefits and Challenges of AI, IoT, and Enterprise Systems Integration. *Journal of Information Technology and Informatics*, 3(2).

Joel, O. T., & Oguanobi, V. U. (2024). Data-driven strategies for business expansion: Utilizing predictive analytics for enhanced profitability and opportunity identification. *International Journal of Frontiers in*

Engineering and Technology Research, 6(02), 071-081.

Johnson, D. S., Sihi, D., & Muzellec, L. (2021, September). Implementing big data analytics in marketing departments: Mixing organic and administered approaches to increase data-driven decision making. In *Informatics* (Vol. 8, No. 4, p. 66). MDPI.

Kabrilyants, R., Obeidat, B., Alshurideh, M., & Masadeh, R. E. (2021). The role of organizational capabilities on e-business successful implementation. *International Journal of Data and Network Science,* 5(3), 417-432.

Kalinin, O., Gonchar, V., Zakharchenko, O., Darushyn, O., Maltsev, M., & Datsiuk, P. (2024). A comprehensive methodology for evaluating economic security in the digitalization of investment. *Revista de Gestao Social e Ambiental*, 18(5), e05441. https://doi.org/10.1051/rgsa.openaccesspublications.org/rgsa/article/view/5441/2014

Kharazishvili, Y., Lyashenko, V., Grishnova, O., Hutsaliuk, O., Petrova, I., & Kalinin, O. (2023). Modeling of priority institutional measures to overcome threats to sustainable development of the region. *IOP Conference Series: Earth and Environmental Science*, 1269, 012023. https://doi.org/10.1088/1755-1315/1269/1/012023

Kolodiziev, O., Chmutova, I., & Biliaieva, V. (2016). Selecting a kind of financial innovation according to the level of a bank's financial soundness & its life cycle stage. *Banks and Bank Systems*, 11(4), 40–49.

Kryukova, I., Zamlynskyi, V., & Vlasenko, T. (2023). Architecture of corporate reporting on the sustainable development of business entities in the agrarian sector as a tool of sustainable agri-management. *Ekonomika APK*, 30(2), 38-48. https://doi.org/10.32317/2221-1055.202302038

Kushwaha, A. K., Kar, A. K., & Dwivedi, Y. K. (2021). Applications of big data in emerging management disciplines: A literature review using text mining. *International Journal of Information Management Data Insights*, 1(2), 100017.

Lagodiienko, V., Perevozova, I., Bakhchivanzhi, L., Ozarko, K., & Milcheva, V. (2023). The role of digital technologies in optimizing the functioning of the marketing and logistics system of the enterprise. *Review of Economics and Finance*, 2019-2026.

Li, H., Yoo, S., & Kettinger, W. J. (2021). The roles of IT strategies and security investments in reducing organizational security breaches. *Journal of Management Information Systems*, 38(1), 222-245.

Markina, I., Somych, N., Taran-Lala, O., Varaksina, E., Potapiuk, I., & Vovk, M. (2022). Managerial aspects of forming enterprises' competitive advantages: The case of agri-food sector. *International Journal on Food System Dynamics*, 13(1), 56–68. http://centmapress.ilb.uni-bonn.de/ojs/index.php/fsd/article/view/A5

Mikalef, P., Krogstie, J., Pappas, I. O., & Pavlou, P. (2020). Exploring the relationship between big data analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities. *Information & Management*, 57(2), 103169.

Mintzberg, H. (1979). Patterns in strategy formation. *International Studies of Management & Organization*, 9(3), 67-86.

Olson, E. M., Olson, K. M., Czaplewski, A. J., & Key, T. M. (2021). Business strategy and the management of digital marketing. *Business horizons*, 64(2), 285-293.

Pererva, I., & Myronova, O. (2023). Use of creative marketing in the implementation of enterprise strategy. *Economics of Development*, 22(2), 28-40. https://doi.org/10.57111/econ/2.2023.28

Popadynes, N., Vyshnevska, O., Irtyshcheva, I., Kramarenko, I., & Ponomarova, M. (2022). The influence of globalization processes on forecasting the activities of market entities. *Journal of Optimization in Industrial Engineering*, 15(1), 261-268. https://doi.org/10.22094/joie.2021.1945341.1909

Pramanik, M. I., Lau, R. Y., Azad, M. A. K., Hossain, M. S., Chowdhury, M. K. H., & Karmaker, B. K. (2020). Healthcare informatics and analytics in big data. *Expert Systems with Applications*, 152, 113388.

Quach, S., Thaichon, P., Martin, K. D., Weaven, S., & Palmatier, R. W. (2022). Digital technologies: tensions in privacy and data. *Journal of the Academy of Marketing Science*, 50(6), 1299-1323.

Shahbaz, M., Gao, C., Zhai, L., Shahzad, F., Luqman, A., & Zahid, R. (2021). Impact of big data analytics on sales performance in pharmaceutical organizations: The role of customer relationship management capabilities. *Plos one*, 16(4), e0250229.

Shet, S. V., Poddar, T., Samuel, F. W., & Dwivedi, Y. K. (2021). Examining the determinants of successful adoption of data analytics in human resource management–A framework for implications. *Journal of Business Research*, 131, 311-326.

Shtal, T., Ptashchenko, O., Rodionov, S., & Kurtsev, O. (2023). Implementation of modern marketing tools in entrepreneurial activity. *Economics of Development*, 22(4), 53-63. https://doi.org/10.57111/econ/4.2023.53

Silva, S. C., Duarte, P. A. O., & Almeida, S. R. (2020). How companies evaluate the ROI of social media marketing programmes: insights from B2B and B2C. *Journal of Business & Industrial Marketing*, 35(12), 2097-2110.

Stachowiak, A., & Pawłyszyn, I. (2021). From fragility through agility to resilience: The role of sustainable improvement in increasing organizational maturity. *Sustainability*, 13(9), 4991.

Stepanenko, S., Kryukova, I., & Vlasenko, T. (2023). Eco-oriented agriculture as a development driver of inclusive agribusiness. *Economics of Development*, 22(1), 20-30. https://doi.org/10.57111/econ/1.2023.20

Voloshyn, V., Fedosova, I., Gonchar, V., Kalinin, O., Mironenko, D., & Polupanova, K. (2023). The analysis of reliability and objectivity of information that can be found on the internet. *Frontiers in Artificial Intelligence and Applications*, 364, 183-194. https://doi.org/10.3233/FAIA220501

Vovk, V., Potapiuk, I., Denysiuk, O., Oslopova, M., Lypovyi, D., & Pysmak, V. (2024). Integration of marketing-logistical strategies in agribusiness: Implications for competitive advantage in a globalized economy. *Nanotechnology Perceptions*, 20 (S9). https://doi.org/10.62441/nano-ntp.v20iS9.44

Wang, J., Omar, A. H., Alotaibi, F. M., Daradkeh, Y. I., & Althubiti, S. A. (2022). Business intelligence ability to enhance organizational performance and performance evaluation capabilities by improving data mining systems for competitive advantage. *Information Processing & Management*, 59(6), 103075.

Zaitsev, Y. O., Ponomariov, O. S., Krasnorutskiy, O. O., Slobodianyk, A. M., & Guley, A. I. (2020). Analysis of the modern monitoring implementation methods as the main stage of digitalization of the agrarian enterprises. *International Journal of Advanced Science and Technology*, 29(6s), 1014-1021. Retrieved from https://sersc.org/journals/index.php/IJAST/article/view/9098