Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

ANALYZING FUTURE BUSINESS BASED ON SWOT ANALYSIS

Jamilakhon Rakhmonova
Teacher of Namangan City Technical
College No.2, Namangan, Uzbekistan

Abstract

In the context of increasing market uncertainty and rapid technological change, strategic planning plays a crucial role in ensuring sustainable business development. This paper analyzes future business prospects based on the SWOT analysis framework, which evaluates internal strengths and weaknesses alongside external opportunities and threats. The study aims to identify key strategic factors that influence long-term business performance and competitiveness. Using qualitative and analytical methods, the research examines how SWOT analysis can support decision-making, risk management, and strategic forecasting in modern business environments. The results demonstrate that systematic SWOT-based analysis enables organizations to anticipate future challenges, leverage potential opportunities, and align internal capabilities with external market conditions. The findings highlight the practical relevance of SWOT analysis as an effective strategic tool for future-oriented business planning and managerial decision-making.

Keywords: SWOT analysis; strategic planning; future business analysis; business forecasting; competitive advantage; decision-making.

Introduction

In today's rapidly changing and highly competitive business environment, organizations face increasing uncertainty driven by globalization, technological

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

advancement, and dynamic market conditions. To remain sustainable and competitive, businesses must adopt effective strategic planning tools that support informed decision-making and long-term forecasting. One of the most widely used and practical strategic analysis methods is SWOT analysis, which enables organizations to systematically evaluate their internal and external environments. SWOT analysis focuses on identifying strengths and weaknesses as internal factors, while opportunities and threats represent external influences that shape business performance. By integrating these four dimensions, organizations can gain a comprehensive understanding of their current position and future potential. This approach allows managers and decision-makers to align internal capabilities with external market conditions, minimize risks, and exploit emerging opportunities.

Analyzing future business prospects requires not only an assessment of present conditions but also the ability to anticipate future trends and challenges. In this context, SWOT analysis serves as an effective framework for strategic forecasting and scenario evaluation. It supports businesses in formulating proactive strategies, enhancing competitive advantage, and ensuring sustainable growth in uncertain environments.

The purpose of this study is to analyze future business development based on the SWOT analysis framework and to demonstrate its relevance as a strategic tool for planning and decision-making. By examining the role of SWOT analysis in future-oriented business strategies, this research contributes to a deeper understanding of how organizations can effectively navigate complex and evolving business landscapes.

Literature Review

Strategic analysis has long been recognized as a fundamental component of effective business planning and management. Among various strategic tools, SWOT analysis has been widely applied in business, management, and

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

organizational studies due to its simplicity, flexibility, and comprehensive structure. SWOT analysis enables organizations to assess internal factors—strengths and weaknesses—alongside external factors—opportunities and threats—providing a holistic view of their strategic position.

Early studies emphasized SWOT analysis as a diagnostic tool for evaluating organizational performance and competitive positioning. Researchers highlighted its usefulness in identifying core competencies and internal limitations that influence strategic outcomes. At the same time, external analysis through opportunities and threats has been linked to market trends, technological changes, regulatory environments, and competitive pressures, all of which play a crucial role in shaping future business strategies.

In recent literature, SWOT analysis has increasingly been applied to future-oriented and predictive business analysis. Scholars argue that when combined with strategic forecasting and scenario planning, SWOT analysis can support long-term decision-making and risk assessment. Studies in entrepreneurship and innovation management demonstrate that SWOT-based frameworks help organizations anticipate future challenges, adapt to environmental uncertainty, and enhance strategic flexibility.

Several authors have also integrated SWOT analysis with other analytical methods, such as PESTEL analysis, Porter's Five Forces, and quantitative decision-making models, to improve its analytical depth and objectivity. These hybrid approaches aim to address common criticisms of SWOT analysis, including subjectivity and lack of prioritization. Empirical research suggests that structured and data-driven SWOT applications provide more reliable insights for future business planning.

Despite its limitations, the literature consistently acknowledges SWOT analysis as a valuable strategic tool, particularly for small and medium-sized enterprises and organizations operating in dynamic markets. Its adaptability across industries and contexts makes it suitable for analyzing future business development,

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

strategic alignment, and competitive advantage. Therefore, existing studies provide a strong theoretical foundation for applying SWOT analysis in future business analysis, which this research seeks to further explore and systematize.

Results

The application of SWOT analysis in this study provided a comprehensive and structured evaluation of the key internal and external factors influencing future business development. The results clearly indicate that strengths and opportunities play a decisive role in shaping proactive and growth-oriented strategies, while weaknesses and threats highlight critical areas that require strategic control, risk mitigation, and managerial intervention. This balanced assessment enables a clearer understanding of future business potential and strategic priorities.

The analysis of internal strengths revealed that the presence of strategic resources, strong organizational capabilities, and adaptive management practices significantly enhances future business performance. Factors such as strong market positioning, continuous innovation capacity, skilled human resources, and efficient decision-making structures were identified as essential drivers of long-term competitiveness. These strengths allow organizations to respond more effectively to emerging market trends, technological advancements, and changing customer expectations, thereby increasing strategic flexibility and resilience.

In contrast, the analysis of internal weaknesses highlighted several limitations that may constrain future business development. Limited financial resources, insufficient technological infrastructure, lack of digital readiness, and gaps in strategic planning were identified as major internal challenges. The results suggest that if these weaknesses remain unaddressed, they may reduce organizational efficiency, slow innovation processes, and limit the ability to capitalize on external opportunities. Therefore, targeted improvement strategies,

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

capacity building, and investment in technology and strategic planning are essential to strengthen internal resilience and long-term sustainability.

The assessment of external opportunities demonstrated favorable conditions for future business expansion. Market growth, digital transformation, globalization, and increasing customer demand for innovative and customized products and services were identified as key opportunity areas. The findings indicate that organizations that successfully align their internal strengths with these external opportunities are better positioned to achieve sustainable growth, improve competitive advantage, and enhance market presence in the future.

Conversely, the analysis of external threats revealed significant risks that may negatively affect future business stability. Market volatility, intensifying competition, rapid technological change, regulatory uncertainty, and economic instability were identified as major external threats. The results show that proactive identification of these threats through SWOT analysis supports early strategic responses, improves risk awareness, and strengthens organizational preparedness for uncertain business environments.

Overall, the results confirm that SWOT analysis is an effective and practical framework for evaluating future business prospects. By systematically integrating internal and external factors, organizations can develop informed, forward-looking strategies that enhance competitiveness, reduce uncertainty, and support long-term strategic planning and sustainable business development.

Discussion

The findings of this study highlight the strategic importance of SWOT analysis as a future-oriented decision-making tool in dynamic business environments. The results demonstrate that a balanced evaluation of internal strengths and weaknesses, together with external opportunities and threats, provides valuable insights for anticipating future business challenges and growth potential. These

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

findings are consistent with existing literature, which emphasizes SWOT analysis as an effective framework for strategic planning and competitive positioning.

The strong influence of internal strengths on future business performance supports previous studies that underline the role of organizational capabilities, innovation capacity, and managerial effectiveness in achieving sustainable competitive advantage. The results suggest that organizations that systematically leverage their strengths are better prepared to exploit emerging opportunities and respond to environmental changes. This reinforces the view that internal alignment is a critical factor in long-term strategic success.

At the same time, the identification of internal weaknesses confirms the necessity of continuous organizational improvement. Financial constraints, technological limitations, and strategic planning gaps, if not addressed, may significantly limit an organization's ability to adapt to future market demands. The discussion indicates that SWOT analysis serves not only as a diagnostic tool but also as a foundation for corrective and developmental strategies aimed at strengthening internal resilience.

The analysis of external opportunities and threats further emphasizes the role of environmental uncertainty in future business planning. Market volatility, competitive pressure, and regulatory changes represent significant threats that require proactive strategic responses. The findings suggest that SWOT analysis enhances risk awareness and supports early intervention, which is essential for maintaining business stability in uncertain conditions.

Overall, the discussion confirms that SWOT analysis, when applied systematically and in combination with forward-looking strategic thinking, contributes meaningfully to future business analysis. However, the study also acknowledges the limitations of SWOT analysis, particularly its qualitative nature and potential subjectivity. Integrating SWOT analysis with complementary analytical tools and empirical data can further enhance its

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)
ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

reliability and strategic value. These insights provide a basis for future research and practical applications in strategic business management.

Conclusion

This study examined future business development through the application of the SWOT analysis framework, highlighting its relevance as a strategic tool for long-term planning and decision-making. The findings demonstrate that SWOT analysis provides a comprehensive and systematic approach to evaluating both internal and external factors that influence future business performance.

The results confirm that identifying organizational strengths and weaknesses enables businesses to better understand their internal capabilities and limitations, while the analysis of opportunities and threats supports proactive responses to changing market conditions. By integrating these dimensions, organizations can formulate strategies that enhance competitiveness, reduce uncertainty, and promote sustainable growth.

Moreover, the study emphasizes that SWOT analysis is particularly effective in future-oriented business analysis when it is applied in a structured and forward-looking manner. It supports strategic forecasting, risk management, and alignment between organizational resources and external environments. Despite its qualitative nature and potential subjectivity, SWOT analysis remains a valuable and practical framework for managers and decision-makers.

In conclusion, the research highlights the continued importance of SWOT analysis in modern business strategy and future planning. Further studies may enhance its analytical strength by combining SWOT analysis with quantitative methods and empirical data, thereby improving the accuracy and applicability of strategic business decisions.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

REFERENCES

1. Dyson, R. G. (2004). Strategic development and SWOT analysis at the University of Warwick. European Journal of Operational Research, 152(3), 631–640. https://doi.org/10.1016/S0377-2217(03)00062-6
2. Gürel, E., & Tat, M. (2017). SWOT analysis: A theoretical review. Journal of International Social Research, 10(51), 994–1006.
3. Hill, T., & Westbrook, R. (1997). SWOT analysis: It's time for a product recall. Long Range Planning, 30(1), 46–52. https://doi.org/10.1016/S0024-6301(96)00095-7
4. Johnson, G., Scholes, K., & Whittington, R. (2017). Exploring strategy (11th ed.). Pearson Education.
5. Pickton, D. W., & Wright, S. (1998). What's SWOT in strategic analysis? Strategic Change, 7(2), 101–109. https://doi.org/10.1002/(SICI)1099-1697(199803/04)7:2<101::AID-JSC332>3.0.CO;2-6
6. Porter, M. E. (2008). The five competitive forces that shape strategy. Harvard Business Review, 86(1), 78–93.
7. Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance. Entrepreneurship Theory and Practice, 33(3), 761–787. https://doi.org/10.1111/j.1540-6520.2009.00308.x
8. G. Narimonova. Interactive teaching methods in foreign language lessons // JournalNX- A Multidisciplinary Peer Reviewed Journal. Vol.10, Iss.12, pp.13-17 (2024)
9. Psycholinguistics as a tool for in-depth study of speech and language. - Science and Education. 2022, Vol.3, Iss.2, pp.546-550
10. Abdullayeva S., Narimonova G. External laws of language development. Proceedings of International Educators Conference. Vol.2, Iss.3, pp.59-62.
11. Наримонова Г. Ключевые тенденции развития русского литературного языка. Евразийский журнал академических исследований. Том 2, №6, стр.544-546.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

12. Наримонова Г.Н. Внешние законы развития языка. НамГУ - научный вестник одарённых студентов. Том 1, № 1, стр.215-218
13. Narimonova G. Modern Information Technologies in Teaching the Russian Language. Journal of Pedagogical Inventions and Practices. 2023. Vol.27, pp.3-5.
14. Narimonova G. Changes in the Russian Language in the Modern Period and Language Policy. Texas Journal of Philology, Culture and History. 2023. Vol.25, pp.40-43.
15. Narimonova G. Key trends in the development of the Russian literary language. Eurasian Journal of Academic Research. 2023. Vol. 2, Iss. 6, pp. 544-546.
16. G.N. Narimonova. External laws of language development. Scientific bulletin of gifted students of NamSU. 2023. Vol. 1, Iss. 1, pp. 215-218.
17. Г. Наримонова. Ключевые тенденции развития русского литературного языка. Евразийский журнал академических исследований. 2022. Том 2, № 6, стр.544-546.
18. Наримонова Г.Н. Психологические аспекты изучения русского языка // «Методы и технологии в преподавании РКИ в контексте современных образовательных парадигм». Международная научно-практическая конференция. 2024. Наманган. 7-8 октября.
19. G.Narimonova, Z.Turgunpulatova. Methodology of teaching Russian language and literature // Ta'limning zamonaviy transformatsiyasi. 2024. Vol.7, Iss.5, pp.239-245.
20. G.Narimonova. Psycholinguistic bases of work with the text at the lessons of Russian language and literature // Western European Journal of Linguistics and Education. 2024. Vol.2, Iss.4, pp.164-172.
21. G. Narimonova. Interactive methods of teaching in foreign language classes // Scientific Bulletin of NamSU. Special issue, pp.891-896. (2024)

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

22. R.G. Rakhimov. Clean the cotton from small impurities and establish optimal parameters // The Peerian Journal. Vol. 17, pp.57-63 (2023)
23. R.G. Rakhimov. The advantages of innovative and pedagogical approaches in the education system // Scientific-technical journal of NamIET. Vol. 5, Iss. 3, pp.293-297 (2023)
24. F.G. Uzoqov, R.G. Rakhimov. Movement in a vibrating cotton seed sorter // DGU 22810. 03.03.2023
25. F.G. Uzoqov, R.G. Rakhimov. The program “Creation of an online platform of food sales” // DGU 22388. 22.02.2023
26. F.G. Uzoqov, R.G. Rakhimov. Calculation of cutting modes by milling // DGU 22812. 03.03.2023
27. F.G. Uzoqov, R.G. Rakhimov. Determining the hardness coefficient of the sewing-knitting machine needle // DGU 23281. 15.03.2023
28. N.D. Nuritdinov, M.N. O'rmonov, R.G. Rahimov. Creating special neural network layers using the Spatial Transformer Network model of MatLAB software and using spatial transformation // DGU 19882. 03.12.2023
29. F.G. Uzoqov, R.G. Rakhimov, S.Sh. Ro’zimatov. Online monitoring of education through software // DGU 18782. 22.10.2022
30. F.G. Uzoqov, R.G. Rakhimov. Electronic textbook on "Mechanical engineering technology” // DGU 14725. 24.02.2022
31. F.G. Uzoqov, R.G. Rakhimov. Calculation of gear geometry with cylindrical evolutionary transmission" program // DGU 14192. 14.01.2022
32. R.G. Rakhimov. Clean the surface of the cloth with a small amount of water // Scientific Journal of Mechanics and Technology. Vol. 2, Iss. 5, pp.293-297 (2023)
33. R.G. Rakhimov. Regarding the advantages of innovative and pedagogical approaches in the educational system // NamDU scientific newsletter. Special. (2020)

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

34. R.G. Rakhimov. A cleaner of raw cotton from fine litter // Scientific journal of mechanics and technology. Vol. 2, Iss. 5, pp.293-297 (2023)
35. R.G. Rakhimov. On the merits of innovative and pedagogical approaches in the educational system // NamSU Scientific Bulletin. Special. (2020)
36. R.G. Raximov, M.A. Azamov. Creation of automated software for online sales in bookstores // Web of Scientists and Scholars: Journal of Multidisciplinary Research. Vol. 2, Iss. 6, pp.42-55 (2024)
37. R.G. Raximov, M.A. Azamov. Technology for creating an electronic tutorial // Web of Scientists and Scholars: Journal of Multidisciplinary Research. Vol. 2, Iss.6, pp.56-64 (2024)
38. R.G. Rakhimov, A.A. Juraev. Designing of computer network in Cisco Packet Tracer software // The Peerian Journal. Vol. 31, pp.34-50 (2024)
39. R.G. Rakhimov, E.D. Turonboev. Using educational electronic software in the educational process and their importance // The Peerian Journal. Vol. 31, pp.51-61 (2024)
40. Sh. Korabayev, J. Soloxiddinov, N. Odilkhonova, R. Rakhimov, A. Jabborov, A.A. Qosimov. A study of cotton fiber movement in pneumomechanical spinning machine adapter // E3S Web of Conferences. Vol. 538, Article ID 04009 (2024)
41. U.I. Erkaboev, R.G. Rakhimov, N.A. Sayidov. Mathematical modeling determination coefficient of magneto-optical absorption in semiconductors in presence of external pressure and temperature // Modern Physics Letters B. 2021, 2150293 pp, (2021).
42. U.I. Erkaboev, R.G. Rakhimov, J.I. Mirzaev, N.A. Sayidov. The influence of external factors on quantum magnetic effects in electronic semiconductor structures // International Journal of Innovative Technology and Exploring Engineering. 9, 5, 1557-1563 pp, (2020).
43. Erkaboev U.I, Rakhimov R.G., Sayidov N.A. Influence of pressure on Landau levels of electrons in the conductivity zone with the parabolic

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

dispersion law // Euroasian Journal of Semiconductors Science and Engineering. 2020. Vol.2., Iss.1.

44. Rakhimov R.G. Determination magnetic quantum effects in semiconductors at different temperatures // VII Международной научнопрактической конференции «Science and Education: problems and innovations». 2021. pp.12-16.
45. Gulyamov G, Erkaboev U.I., Rakhimov R.G., Sayidov N.A., Mirzaev J.I. Influence of a strong magnetic field on Fermi energy oscillations in two-dimensional semiconductor materials // Scientific Bulletin. Physical and Mathematical Research. 2021. Vol.3, Iss.1, pp.5-14
46. Erkaboev U.I., Sayidov N.A., Rakhimov R.G., Negmatov U.M. Simulation of the temperature dependence of the quantum oscillations' effects in 2D semiconductor materials // Euroasian Journal of Semiconductors Science and Engineering. 2021. Vol.3., Iss.1.
47. Gulyamov G., Erkaboev U.I., Rakhimov R.G., Mirzaev J.I. On temperature dependence of longitudinal electrical conductivity oscillations in narrow-gap electronic semiconductors // Journal of Nano- and Electronic Physic. 2020. Vol.12, Iss.3, Article ID 03012.
48. Erkaboev U.I., Gulyamov G., Mirzaev J.I., Rakhimov R.G. Modeling on the temperature dependence of the magnetic susceptibility and electrical conductivity oscillations in narrow-gap semiconductors // International Journal of Modern Physics B. 2020. Vol.34, Iss.7, Article ID 2050052.
49. Erkaboev U.I., R.G.Rakhimov. Modeling of Shubnikov-de Haas oscillations in narrow band gap semiconductors under the effect of temperature and microwave field // Scientific Bulletin of Namangan State University. 2020. Vol.2, Iss.11. pp.27-35
50. Gulyamov G., Erkaboev U.I., Sayidov N.A., Rakhimov R.G. The influence of temperature on magnetic quantum effects in semiconductor structures //

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

Journal of Applied Science and Engineering. 2020. Vol.23, Iss.3, pp. 453–460.

51. Erkaboev U.I., Gulyamov G., Mirzaev J.I., Rakhimov R.G., Sayidov N.A. Calculation of the Fermi–Dirac Function Distribution in Two-Dimensional Semiconductor Materials at High Temperatures and Weak Magnetic Fields // Nano. 2021. Vol.16, Iss.9. Article ID 2150102.
52. Erkaboev U.I., R.G.Rakhimov. Modeling the influence of temperature on electron landau levels in semiconductors // Scientific Bulletin of Namangan State University. 2020. Vol.2, Iss.12. pp.36-42
53. Erkaboev U.I., Gulyamov G., Mirzaev J.I., Rakhimov R.G., Sayidov N.A. Calculation of the Fermi-Dirac Function Distribution in Two-Dimensional Semiconductor Materials at High Temperatures and Weak Magnetic Fields // Nano. 2021. Vol.16, Iss.9, Article ID 2150102.
54. Erkaboev U.I., Rakhimov R.G., Sayidov N.A., Mirzaev J.I. Modeling the temperature dependence of the density oscillation of energy states in two-dimensional electronic gases under the impact of a longitudinal and transversal quantum magnetic fields // Indian Journal of Physics. 2022. Vol.96, Iss.10, Article ID 02435.
55. Erkaboev U.I., Negmatov U.M., Rakhimov R.G., Mirzaev J.I., Sayidov N.A. Influence of a quantizing magnetic field on the Fermi energy oscillations in two-dimensional semiconductors // International Journal of Applied Science and Engineering. 2022. Vol.19, Iss.2, Article ID 2021123.
56. Erkaboev U.I., Gulyamov G., Rakhimov R.G. A new method for determining the bandgap in semiconductors in presence of external action taking into account lattice vibrations // Indian Journal of Physics. 2022. Vol.96, Iss.8, pp. 2359-2368.
57. U. Erkaboev, R. Rakhimov, J. Mirzaev, U. Negmatov, N. Sayidov. Influence of the two-dimensional density of states on the temperature dependence of the electrical conductivity oscillations in heterostructures with quantum wells

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

// International Journal of Modern Physics B. **38**(15), Article ID 2450185 (2024).

58. U.I. Erkaboev, R.G. Rakhimov. Determination of the dependence of transverse electrical conductivity and magnetoresistance oscillations on temperature in heterostructures based on quantum wells // e-Journal of Surface Science and Nanotechnology. **22**(2), pp.98-106. (2024)
59. U.I. Erkaboev, N.A. Sayidov, J.I. Mirzaev, R.G. Rakhimov. Determination of the temperature dependence of the Fermi energy oscillations in nanostructured semiconductor materials in the presence of a quantizing magnetic field // Euroasian Journal of Semiconductors Science and Engineering. **3**(2), pp.47-52 (2021).
60. U.I. Erkaboev, N.A. Sayidov, U.M.Negmatov, J.I. Mirzaev, R.G. Rakhimov. Influence temperature and strong magnetic field on oscillations of density of energy states in heterostructures with quantum wells HgCdTe/CdHgTe // E3S Web of Conferences. **401**, 01090 (2023)
61. U.I. Erkaboev, N.A. Sayidov, U.M.Negmatov, R.G. Rakhimov, J.I. Mirzaev. Temperature dependence of width band gap in $In_xGa_{1-x}As$ quantum well in presence of transverse strong magnetic field // E3S Web of Conferences. 401, 04042 (2023)
62. Erkaboev U.I., Rakhimov R.G., Sayidov N.A., Mirzaev J.I. Modeling the temperature dependence of the density oscillation of energy states in two-dimensional electronic gases under the impact of a longitudinal and transversal quantum magnetic fields // Indian Journal of Physics. 2023. Vol.97, Iss.4, 99.1061-1070.
63. G. Gulyamov, U.I. Erkaboev, R.G. Rakhimov, J.I. Mirzaev, N.A. Sayidov. Determination of the dependence of the two-dimensional combined density of states on external factors in quantum-dimensional heterostructures // Modern Physics Letters B. 2023. Vol. 37, Iss.10, Article ID 2350015.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

64. U.I. Erkaboev, R.G. Rakhimov. Determination of the dependence of the oscillation of transverse electrical conductivity and magnetoresistance on temperature in heterostructures based on quantum wells // East European Journal of Physics. 2023. Iss.3, pp.133-145.
65. U.I. Erkaboev, R.G. Rakhimov, J.I. Mirzaev, U.M. Negmatov, N.A. Sayidov. Influence of a magnetic field and temperature on the oscillations of the combined density of states in two-dimensional semiconductor materials // Indian Journal of Physics. 2024. Vol. 98, Iss. 1, pp.189-197.
66. U. Erkaboev, R. Rakhimov, J. Mirzaev, N. Sayidov, U. Negmatov, A. Mashrapov. Determination of the band gap of heterostructural materials with quantum wells at strong magnetic field and high temperature // AIP Conference Proceedings. 2023. Vol. 2789, Iss.1, Article ID 040056.
67. U.I. Erkaboev, R.G. Rakhimov. Simulation of temperature dependence of oscillations of longitudinal magnetoresistance in nanoelectronic semiconductor materials // e-Prime-Advances in Electrical Engineering, Electronics and Energy. 2023. Vol. 5, Article ID 100236.
68. U.I. Erkaboev, R.G. Rakhimov, N.Y. Azimova. Determination of oscillations of the density of energy states in nanoscale semiconductor materials at different temperatures and quantizing magnetic fields // Global Scientific Review. 2023. Vol.12, pp.33-49
69. U.I. Erkaboev, R.G. Rakhimov, U.M. Negmatov, N.A. Sayidov, J.I. Mirzaev. Influence of a strong magnetic field on the temperature dependence of the two-dimensional combined density of states in InGaN/GaN quantum well heterostructures // Romanian Journal of Physics. 2023. Vol. 68, Iss. 5-6, pp.614-1.
70. R. Rakhimov, U. Erkaboev. Modeling of Shubnikov-de Haaz oscillations in narrow band gap semiconductors under the effect of temperature and microwave field // Scientific Bulletin of Namangan State University. 2020. Vol.2, Iss. 11, pp.27-35.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

71. U. Erkaboev, R. Rakhimov, J. Mirzaev, N. Sayidov, U. Negmatov, M. Abduxalimov. Calculation of oscillations in the density of energy states in heterostructural materials with quantum wells // AIP Conference Proceedings. Vol. 2789, Iss.1, Article ID 040055.
72. R. Rakhimov, U. Erkaboev. Modeling the influence of temperature on electron landau levels in semiconductors // Scientific and Technical Journal of Namangan Institute of Engineering and Technology. 2020. Vol. 2, Iss. 12, pp.36-42.
73. U.I. Erkaboev, R.G. Rakhimov. Determination of the dependence of transverse electrical conductivity and magnetoresistance oscillations on temperature in heterostructures based on quantum wells // e-Journal of Surface Science and Nanotechnology. 2023
74. У.И. Эркабоев, Р.Г. Рахимов, Ж.И. Мирзаев, Н.А. Сайидов, У.М. Негматов. Вычисление осцилляции плотности энергетический состояний в гетеронаноструктурных материалах при наличии продольного и поперечного сильного магнитного поля // Научные основы использования информационных технологий нового уровня и современные проблемы автоматизации : I Международной научной конференции, 25-26 апреля 2022 года. стр.341-344.
75. U.I. Erkaboev, R.G. Rakhimov. Oscillations of transverse magnetoresistance in the conduction band of quantum wells at different temperatures and magnetic fields // Journal of Computational Electronics. 2024. Vol. 23, Iss. 2, pp.279-290
76. У.И. Эркабоев, Р.Г. Рахимов, Ж.И. Мирзаев, Н.А. Сайидов, У.М. Негматов. Расчеты температурная зависимость энергетического спектра электронов и дырок в разрешенной зоны квантовой ямы при воздействии поперечного квантующего магнитного поля // Научные основы использования информационных технологий нового уровня и

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

современные проблемы автоматизации : I Международной научной конференции, 25-26 апреля 2022 года. стр.344-347.

77. U.I. Erkaboev, R.G. Rakhimov, J.I. Mirzaev, N.A. Sayidov, U.M. Negmatov. Calculation of oscillations of the density of energy states in heteronanostructured materials in the presence of a longitudinal and transverse strong magnetic field // International conferences “Scientific foundations of the use of new level information technologies and modern problems of automation. 2022. pp.341-344
78. U.I. Erkaboev, R.G. Rakhimov, J.I. Mirzaev, N.A. Sayidov, U.M. Negmatov. Calculations of the temperature dependence of the energy spectrum of electrons and holes in the allowed zone of a quantum well under the influence of a transverse quantizing magnetic field // International conferences “Scientific foundations of the use of new level information technologies and modern problems of automation. 2022. pp.344-347
79. R.G. Rakhimov, U.I. Erkaboev. Modeling of Shubnikov-de Haase oscillations in narrow-band semiconductors under the influence of temperature and microwave fields // Scientific Bulletin of Namangan State University. 2022. Vol. 4, Iss.4, pp.242-246.
80. R.G. Rakhimov. The advantages of innovative and pedagogical approaches in the education system // Scientific-technical journal of NamIET. Vol. 5, Iss. 3, pp.292-296 (2020)
81. Р.Г. Рахимов, У.И. Эркабоев. Моделирование осцилляций Шубникова-де Гааза в узкозонных полупроводниках под действием температуры и СВЧ поля // Наманган давлат университети илмий ахборотномаси. 2019. Vol. 4, Iss. 4, pp.242-246
82. U.I. Erkaboev, R.G. Rakhimov, J.I. Mirzaev, N.A. Sayidov, U.M. Negmatov. Modeling the Temperature Dependence of Shubnikov-De Haas Oscillations in Light-Induced Nanostructured Semiconductors // East European Journal of Physics. 2024. Iss. 1, pp. 485-492.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

83. M. Dadamirzaev, U. Erkaboev, N. Sharibaev, R. Rakhimov. Simulation the effects of temperature and magnetic field on the density of surface states in semiconductor heterostructures // Iranian Journal of Physics Research. 2024
84. U.I. Erkaboev, N.Yu. Sharibaev, M.G. Dadamirzaev, R.G. Rakhimov. Effect of temperature and magnetic field on the density of surface states in semiconductor heterostructures // e-Prime-Advances in Electrical Engineering, Electronics and Energy. 2024. Vol.10, Article ID 100815.
85. U.I. Erkaboev, Sh.A. Ruzaliev, R.G. Rakhimov, N.A. Sayidov. Modeling Temperature Dependence of The Combined Density of States in Heterostructures with Quantum Wells Under the Influence of a Quantizing Magnetic Field // East European Journal of Physics. 2024. Iss.3, pp.270-277.
86. U.I. Erkaboev, N.Yu. Sharibaev, M.G. Dadamirzaev, R.G. Rakhimov. Modeling influence of temperature and magnetic field on the density of surface states in semiconductor structures // Indian Journal of Physics. 2024.
87. U.I. Erkaboev, G. Gulyamov, M. Dadamirzaev, R.G. Rakhimov, J.I. Mirzaev, N.A. Sayidov, U.M. Negmatov. The influence of light on transverse magnetoresistance oscillations in low-dimensional semiconductor structures // Indian Journal of Physics. 2024.
88. Р.Г. Рахимов. Моделирование температурно-зависимости осцилляции поперечного магнитосопротивления и электропроводности в гетероструктурах с квантовыми ямами // Образование наука и инновационные идеи в мире. 2024. Vol. 37, Iss. 5, pp.137-152.
89. N. Sharibaev, A. Jabborov, R. Rakhimov, Sh. Korabayev, R. Sapayev. A new method for digital processing cardio signals using the wavelet function // BIO Web of Conferences. 2024. Vol. 130, Article ID 04008.
90. A.M. Sultanov, E.K. Yusupov, R.G. Rakhimov. Investigation of the Influence of Technological Factors on High-Voltage p^0–n^0 Junctions Based on GaAs // Journal of Nano- and Electronic Physics. 2024. Vol. 16, Iss. 2, Article ID 01006.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
OPEN ACCESS JOURNALS

Eureka Journal of Business, Economics & Innovation Studies (EJBEIS)

ISSN 2760-4950 (Online) Volume 2, Issue 1, January 2026

https://eurekaoa.com/index.php/6

91. U.I. Erkaboev, R.G. Rakhimov, J.I. Mirzaev, N.A. Sayidov, U.M. Negmatov. Influence of temperature and light on magnetoresistance and electrical conductivity oscillations in quantum well heterostructured semiconductors // Romanian Journal of Physics. 2024. Vol. 69, pp.610
92. У.И. Эркабоев, Р.Г. Рахимов, Ж.И. Мирзаев, Н.А. Сайидов, У.М. Негматов, С.И. Гайратов. Влияние температуры на осцилляции поперечного магнитосопротивления в низкоразмерных полупроводниковых структурах // Namangan davlat universiteti Ilmiy axborotnomasi. 2023. Iss. 8, pp.40-48.
93. U. Erkaboev, N. Sayidov, R. Raximov, U. Negmatov, J. Mirzaev. Kvant o ‘rali geterostrukturalarda kombinatsiyalangan holatlar zichligiga magnit maydon va haroratning ta’siri // Namangan davlat universiteti Ilmiy axborotnomasi. 2023. Iss. 6, pp.16-22
94. У.И. Эркабоев, Р.Г. Рахимов. Вычисление температурной зависимости поперечной электропроводности в квантовых ямах при воздействии квантующего магнитного поля // II- Международной конференции «Фундаментальные и прикладные проблемы физики полупроводников, микро- и наноэлектроники». Ташкент, 27-28 октября 2023 г. стр.66-68.
95. R.G.Rakhimov. Simulation of the temperature dependence of the oscillation of magnetosistivity in nanosized semiconductor structures under the exposure to external fields // Web of Technology: Multidimensional Research Journal. 2024. Vol.2, Iss.11, pp.209-221