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EVALUATING THE ALIGNMENT OF HIGHER EDUCATION SYSTEMS WITH CONTEMPORARY LABOR MARKET REQUIREMENTS: AN ANALYTICAL PERSPECTIVE

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Abstract.
Purpose. The purpose of this study is to evaluate the degree to which higher education programs in Kazakhstan align with the evolving requirements of the labor market. It focuses on assessing the effectiveness of academic training in preparing graduates for professional practice and in meeting employer expectations, especially in light of rapid technological change, globalization, and shifting economic conditions.
Design/methodology/approach. The study adopts a mixed-methods approach, combining statistical analysis of national graduate employment data, expert evaluations of bachelor programs, and labor market insights derived from the HeadHunter platform. Indicators such as graduate employment rates, median salaries, job-search duration, and curriculum relevance are analyzed to assess the level of alignment between education outputs and labor market demands.
Findings. The analysis shows that programs characterized by strong industry partnerships, practical orientation, and flexible curricula lead to higher graduate employability outcomes. These programs demonstrate better performance in terms of employment rates, job relevance, and career readiness of graduates.
Originality. This research offers both scientific and practical contributions by bridging the gap between academic preparation and labor market requirements in Kazakhstan. It provides new evidence on the role of curriculum adaptability and university – industry collaboration in enhancing employability, thereby informing policymakers, educators, and employers on strategies for aligning higher education with contemporary labor market needs.
Keywords: Higher Education, Labor Market Alignment, Graduate Employability, University-Industry Collaboration.

Introduction

In today's world of rapid technological change and shifting economic conditions, the labor market is placing increasingly complex demands on young professionals. Universities, as the main providers of higher education (THE, 2024), face the challenge of not only teaching core knowledge but also adapting quickly to new skills and professions that are in demand. Understanding how well higher education aligns with these labor market needs has therefore become both a scientific and a practical issue, one that directly affects economic growth, workforce competitiveness, and the effectiveness of public policy.

The importance of this question is amplified by global trends such as digitalization, automation of production, the rise of creative industries, and the overall transformation of employment structures. Under these circumstances, it becomes especially relevant to examine whether academic programs and standards are keeping pace with what employers actually require, as well as with long-term economic shifts (Acemoglu, 2023).

The aim of this study is to evaluate how effectively the higher education system meets current labor market expectations. The analysis draws on international experience, statistical evidence, and leading theoretical approaches from studies indexed in Sco-

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pus and Web of Science. The novelty of this research lies in proposing tools and indicators that help measure how adaptable higher education is to labor market changes and in forecasting possible directions for its modernization.

Ultimately, this study seeks to shed light on the relationship between educational development and broader economic restructuring. By doing so, it contributes to more evidence-based recommendations for policymakers and supports the goal of making graduates more competitive at the global level.

Literature review

Contemporary debates on knowledge production and intellectual property increasingly adopt a critical perspective on the capitalist logic that underpins scientific communication. A significant example is the article by S. G. Basilio (2025), which draws on Karl Marx's theory of value to explore how intellectual property rents operate as mechanisms of capital accumulation within the global publishing industry.

Basilio argues that, rather than decentralizing knowledge, the digital revolution has reinforced market concentration and intensified the commodification of academic labor. Researchers occupy a contradictory position: they are both producers, whose rights are transferred to powerful publishing houses, and consumers, who must pay subscription fees or Article Processing Charges to access their own work. Her discussion of the Brazilian higher education system is particularly revealing. She shows how substantial public research funding is effectively redirected to private publishing conglomerates, a process that, in her view, strengthens national dependence on global "mega-publishers" and reproduces structural inequalities between the center and periphery of the international academic landscape.

Other scholarship focuses on the relationship between higher education and the labor market, with growing attention to the influence of social factors on integration processes. D. Lajçi and B. Kuqi (2024), for example, examine how demographic change, cultural norms, and socio-economic conditions shape the expansion of higher education and its responsiveness to employment demands. Employing a mixed-methods design that combines statistical data with qualitative evidence, they identify drivers such as youth population growth, migration trends, and prevailing attitudes toward education. Their findings suggest that successful graduate employment depends not only on aligning curricula with occupational requirements but also on wider social contexts, including family expectations, gender roles, and regional inequalities.

The global emphasis on sustainable development has also informed higher education research. A.A. Tailakova and colleagues (2024) investigate the role of universities in the Kyrgyz Republic in advancing education for the green economy. They conclude that building human capital for this sector requires ensuring the international competitiveness of academic programs and graduates. In their view, Kyrgyz universities must address domestic environmental challenges while also positioning themselves within the global labor market for sustainability specialists.

Further insight comes from China, where T. Hang and Y. Zhou (2024) analyze the effect of major selection on graduates' initial wages. Their quantitative study shows that salaries are higher when graduates choose specialized majors and when their first employment closely corresponds to their field of study. Interestingly, they find that family background factors such as hukou status and parental education exert little influence on either major choice or institutional selection. These finding challenges long-standing assumptions about rural–urban stratification and suggests that Chinese higher education may function as a pathway for social mobility and equity.

Finally, the rapid growth of microcredentials has become a defining feature of contemporary higher education reform. M. Salmon (2023) traces the drivers behind their global rise and considers their implications for universities. Defined as short, skills-focused programs that provide formal accreditation aligned with workplace needs, microcredentials have been embraced by governments and international actors as flexible responses to unstable labor markets. Salmon argues that the speed and scale of their adoption signal not just a policy trend but a structural rethinking of how universities approach lifelong learning and professional development.

Methodology

This study assesses how well higher education programs in Kazakhstan align with labor market requirements, focusing on the preparation of graduates with relevant skills and competencies. The underlying hypothesis is that alignment varies by region, discipline, and program type, with stronger correspondence in urban centers and programs with established industry partnerships.

The research combines quantitative and qualitative data. National statistics provide information on

higher education institutions, student enrollment, and graduate employment trends (2022–2024). Program evaluation data from the "Atameken" National Chamber of Entrepreneurs cover 2,051 bachelor programs, assessing curriculum relevance, practical orientation, and alignment with employer needs (Atameken, 2024). Labor market analytics from HeadHunter (2025) capture vacancy distribution, required experience, and skill demand. International literature indexed in Scopus and Web of Science provides comparative benchmarks.

Data were analyzed through sequential stages: literature review, compilation of statistical and program evaluation indicators, and comparison across regions, disciplines, and program types. Curriculum alignment was assessed via qualitative content analysis, focusing on hard and soft skills. Triangulation of multiple data sources ensured reliability, while visualization illustrated regional and sectoral disparities.

The novelty of this approach lies in integrating labor market analytics with program evaluations and national statistics, providing a comprehensive, evidence-based assessment of higher education responsiveness and graduate employability.

Results and discussion

Currently, the higher education system of the Republic of Kazakhstan is undergoing dynamic development, supported by both public and private higher education institutions. According to the Bureau of National Statistics of the Republic of Kazakhstan, the number of higher education institutions in the country has demonstrated the following changes over the past seven years.

The reduction in the number of higher education institutions in Kazakhstan can be attributed to a set of reforms aimed at enhancing educational quality and optimizing the national higher education infrastructure. Key factors include the consolidation of universities to ensure more efficient allocation of resources, the strengthening of licensing requirements, and the broader policy emphasis on improving academic standards. These measures reflect the government's effort to balance quantity with quality in higher education provision.

In the 2024–2025 academic year, a total of 113 higher education institutions were officially registered (Bureau of National Statistics, 2024). Of these, 56.6% were private, 42.5% were public, and 0.9% were foreign institutions. Student distribution across these institutions also illustrates an almost equal balance: 51.3% of students were enrolled in public universities, 48% in private universities, and 0.7% in foreign institutions. This structural composition highlights both the significant role of private institutions in the sector and the continued centrality of state universities in providing access to higher education. It also suggests a gradual diversification of the system, with foreign institutions playing a small but symbolically important role in internationalizing the higher education landscape."

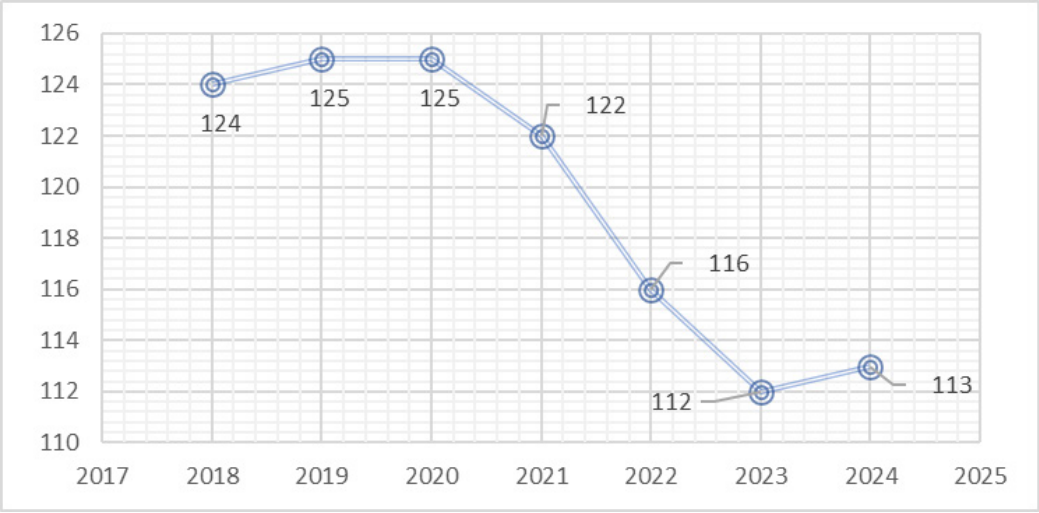

Figure 1 – Changes in the number of higher education institutions in the Republic of Kazakhstan between 2018 and 2024
Note - compiled by the author based on the source (Bureau of National Statistics, 2024)

In the era of digitalization and globalization, the creation of an effective innovation ecosystem is unthinkable without close cooperation between universities and industry. The 'triple helix' model developed by Henry Etzkowitz and Loet Leydesdorff (2023) (university–business–government) emphasizes the need for a balanced partnership across academic, industrial, and governmental spheres. Within this framework, universities act as generators of knowledge, providers of skilled professionals, and centers of research; businesses convert these intellectual resources into technologies, products, and economic value; while government institutions establish the regulatory and financial foundations that make sustained, innovation-driven development possible.

In 2024, the National Chamber of Entrepreneurs 'Atameken' evaluated 2,051 bachelor programs across 95 universities in Kazakhstan (Atameken, 2024). A central element of its methodology is the 'total score based on expert evaluation,' which reflects program quality as assessed by industry specialists and employers. This indicator goes beyond statistics, considering the relevance of curricula, practical orientation, internship opportunities, and graduate competencies. The resulting score highlights both the degree of university–employer collaboration and the employability of graduates, making it a key component of the ranking results.

Expert evaluations show that universities in Almaty and Astana achieve the highest scores, reflecting stronger infrastructure and competitiveness. Humanities and creative programs generally outperform technical and legal fields due to closer industry ties and greater practice orientation. However, score differences across sectors remain relatively small, indicating steady progress in aligning higher education with labor market needs.

Table 1 – Employers' Evaluation Level of Kazakhstan University Graduates

Category	Entity / Program	Score
Average (all EPs & universities)	Overall average	**0.404**
Region – Highest	Almaty city	0.421
	Astana city	0.412
Region – Lowest	Ulytau region	0.387
University – Highest	T. Zhurgenov Kazakh National Academy of Arts	0.450
	Kazakh National Academy of Choreography	0.448
University – Lowest	D.A. Konaev Eurasian Law Academy	0.360
Educational Program – Highest	Pharmaceutical Production Technology	0.449
Educational Program – Lowest	Plant Production	0.320
Author's compilation based on source (Atameken, 2024)		

The "Atameken" National Chamber of Entrepreneurs of the Republic of Kazakhstan and the Ministry of Labour and Social Protection of the Population of the Republic of Kazakhstan conduct an annual survey on workforce demand. In 2023, the survey covered 51.2 thousand business entities, of which 13 thousand entities reported a need for 134 thousand specialists. The requirements for these 134 thousand in-demand specialists are as follows in table 2:

Table 2 – Employers' Requirements for Graduates by Level of Higher Education

Requirement	Percentage
Possess vocational–technical education	46.0 %
Higher education not required	27.0 %
Hold a higher education degree	21.6 %
Hold a certificate of completion of short-term professional training	5.4 %
Author's compilation based on source (Atameken, 2024)	

A key indicator of university–industry collaboration is the alignment between curricula and labor market requirements. By comparing employer demands for hard and soft skills with the learning outcomes of degree programs, it becomes possible to assess how effectively universities prepare practice-oriented graduates. In Kazakhstan, this study employs data from the HeadHunter (hh.kz) platform, focusing on the most in-demand vacancies, to evaluate the extent to which higher education outputs correspond to current labor market needs.

As of 16 March 2025, the HeadHunter platform in the Republic of Kazakhstan listed 395 vacancies. The distribution of required work experience is as follows:

Indicators used in ranking educational programs play a key role in assessing the alignment of higher education with labor market needs. Metrics such as graduate employment rates, job-search duration, and median salaries measure labor market demand, while employer involvement in curriculum design and internships ensures programs address real economic requirements. Together, these indicators reveal program effectiveness, strengthen the link between theory and practice, and contribute to improving the overall quality of education.

Below is the employment rate of graduates in Kazakhstan for the period 2022–2024 (National Statistics Bureau, 2024).

Table 3 – Work Experience Requirements for Job Vacancies on the HeadHunter Platform in Kazakhstan

Required Work Experience	Number of Vacancies
No experience	20
1–3 years	136
3–6 years	201
More than 6 years	38
Author's compilation based on source (HeadHunter, 2024)	

Table 4 – Graduate Employment Outcomes

Year	Graduate Employment Rate (%)	Median Salary (KZT)	Average Job Search Duration (months)	Employer Satisfaction with Relevance of Educational Programs (%)
2022	79.5	167,577	3.2	67.5
2023	82.8	168,156	2.6	68
2024	80.0	168,887	3.3	–
Author's compilation based on source (National Statistics Bureau, 2024)				

Analysis of graduate employment data reveals significant regional disparities. In 2024, employment rates reached 90% in Almaty Region but only 51% in Kyzylorda Region, reflecting differences in economic development, labor market structure, and infrastructural capacities. High-demand fields include informatics, robotics, technical physics, and medicine. Migration from rural to urban areas further affects the availability of skilled personnel in less developed regions.

Nationally, employment rates showed positive trends in 2022–2023, driven by economic growth, rising demand for qualified specialists, and alignment of educational programs with labor market needs. The slight decline in 2024 may reflect structural challenges, increased competition, and programmatic limitations.

Job search duration similarly reflects market dynamics: the reduction to 2.6 months in 2023 indicates effective coordination between universities and employers, while the increase to 3.3 months in 2024 signals economic instability and skill–demand mismatches. These findings underscore the importance of enhancing educational quality and strengthening university–employer collaboration to align curricula with regional labor market requirements.

Conclusion

The findings of this study substantiate that the alignment of higher education systems with contemporary labor market requirements constitutes a multifaceted phenomenon shaped by economic structures, regional development disparities, institutional capacities, and socio-demographic factors. In the context of Kazakhstan, ongoing reforms–including consolidation of higher education institutions, enhancement of quality assurance mechanisms, and diversification of academic programs–have contributed to measurable improvements in graduate employability and

program relevance. Nevertheless, persistent regional asymmetries indicate that economic concentration, infrastructural differences, and local labor demand continue to influence the effectiveness of higher education in preparing work-ready graduates.

Empirical evidence highlights the critical importance of integrating practical-oriented curricula, industry collaboration, and competency-based education to ensure that graduates acquire both technical (hard) and transversal (soft) skills that correspond to current and emerging labor market needs, particularly in sectors such as information technology, robotics, technical physics, medicine, and sustainable development (Helms, 2021). The utilization of data-driven approaches, including labor market analytics and demand-focused platforms, enables universities to systematically calibrate their programs to the evolving requirements of employers.

From a policy and strategic perspective, the study underscores the necessity of sustaining institutional partnerships within the triple helix framework (university–industry–government) to facilitate the co-creation of knowledge, foster innovation, and ensure economic relevance. Continuous monitoring of labor market dynamics, targeted adaptation of educational programs, and the introduction of flexible models such as microcredentials are essential to mitigate structural mismatches and enhance workforce readiness.

In conclusion, higher education institutions are central to cultivating a competitive and adaptive labor force; however, the effectiveness of these institutions in meeting labor market demands is contingent upon the systematic integration of evidence-based curricula, strengthened university–employer linkages, and proactive alignment with regional and sectoral economic priorities. Such an approach not only reinforces the practical applicability of academic programs but also contributes to the broader objectives of national economic development and sustainable human capital formation.

Conflict of interest: the authors declare that there is no conflict of interest.

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BUSINESS INTELLIGENCE AND ORGANISATIONAL PERFORMANCE IN MANUFACTURING ORGANISATIONS OF LAGOS METROPOLIS

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Abstract.
Purpose. The purpose of this study is to examine the influence of business intelligence on organizational performance within manufacturing organizations. Specifically, it explores the role of environmental intelligence, consumer intelligence, and business intelligence as drivers of competitive advantage and market share growth.
Design/methodology/approach. A quantitative research design was adopted, using a structured questionnaire as the primary data collection tool. Data were obtained from 150 respondents working in manufacturing organizations. Statistical analysis was conducted to identify correlations between business intelligence dimensions and measures of organizational performance.
Findings. The results reveal that environmental intelligence has a positive correlation with organizational performance, while consumer intelligence significantly influences market share. Moreover, the study finds that business intelligence functions as a key source of competitive advantage in manufacturing firms.
Originality. This research contributes to the growing body of knowledge on strategic information systems by highlighting how business intelligence tools enhance competitiveness and sustainability. The study recommends that organizations develop clear business intelligence objectives aligned with corporate goals to ensure long-term performance improvement.
Keywords: Business intelligence, Organizational performance, Business environment, customer intelligence.

Introduction

In a monopolistically competitive market, company operators, including entrepreneurs and government entities, are tasked with formulating rules and implementing tactics to secure a competitive advantage. To achieve success in the market, governments and corporations must make timely and appropriate judgements within their business strategy. Relevant information is essential for making informed judgements. The increasing significance of information profoundly affects its value, scope, quality, and quantity across many formats. Decisions must be made swiftly, frequently in real time, and typically necessitate automatic assistance. This duty is performed by business intelligence, which serves as a crucial support tool for decision-making and is an essential component of the everyday operations of managers, analysts, and executives throughout the organisation (Olszak & Ziemba, 2006). The primary aims of business intelligence are to provide interactive data access, permit data manipulation, and empower business managers and analysts to do relevant analysis (Wadie & Mohamed, 2013).

Business intelligence is an essential element of effective business management. They aim to improve managerial decision-making within businesses. A business intelligence system is a complex initiative that incorporates technology and information system applications, greatly enhanced by the analytical and planning capabilities of firms and organisations. It is based on the notion of multidimensionality, en-

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abling the analysis of reality from multiple perspectives (Al-Ma, 2013). The necessity for the deployment and utilisation of business intelligence mostly arises from the significant expectations imposed on enterprise management. In a context of intensifying rivalry, corporate managers and analysts must make judgements under time constraints while shouldering significant responsibilities. To make informed decisions, it is essential to provide pertinent and objective information that is readily accessible, with minimal technical complexity, enabling the swift formulation of new requests for additional information aligned with the current business context (Baden-Fuller & Haefliger, 2013).

Business environments are dynamic, requiring businesses to recognise possible threats and opportunities in the external environment through strategic intelligence efforts to maintain survival. Strategic intelligence is essential for the survival of the Nigerian banking sector, which is marked by fierce rivalry. Numerous organisations, including beverage companies, are grappling with stringent new competitive requirements regarding speed, quality, efficiency, and enhanced market share to enhance their competitiveness and adaptability to fulfil client expectations. This is due to the quick evolution of customers' demands, choices, preferences, and awareness. However, alterations in the external business climate have rendered certain beverage firms susceptible to their competitors, compelling some to either downsize their workforce or diminish their number of outlets as a strategy to navigate the fierce rivalry (Fleisher & Bensoussan, 2007).

However, in the absence of a robust intelligence framework within organisations, it is challenging to respond proactively. Alterations in the competitive landscape thus allow for the generation of erroneous information, which undermines the organization's effective and efficient decision-making process. Organisations increasingly depend on information and knowledge, as continuous growth and competitive advantage stem from these resources. This study aims to assess the impact of business information on organisational performance in Nigeria.

Evolving from this, there were three hypotheses formulated for this study

H_1:	There is no relationship between environmental intelligence and organizational performance in Nestle Nigeria Plc.
H_2:	Consumer intelligence does not have significant influence on organizational Market Share.
H_3:	There is no relationship between business intelligence and competitive advantage in Nestle Nigeria Plc

Concept of Business Intelligence

Business Intelligence (BI) encompasses two fundamental conceptions of the term intelligence. The first, however less commonly, pertains to the application of human intelligence in corporate endeavours. Business Intelligence is an emerging field focused on the application of human cognitive abilities and artificial intelligence technology for management and decision-making across many business contexts. The second pertains to intelligence as information esteemed for its significance and timeliness. It comprises specialised knowledge, proficiency, and technology that enhance the administration of both organisational and individual enterprises. Thus, Business Intelligence encompasses a variety of tools and technology designed for data gathering, access improvement, and analysis, aimed at assisting enterprise users in making informed business decisions. The word denotes have a thorough understanding of all elements influencing the company. Companies must possess a comprehensive understanding of elements including consumers, rivals, business partners, the economic climate, and internal processes to make successful and high-quality business decisions. Business Intelligence empowers organisations to make educated decisions (Ranjan, 2009).

The subject of Business Intelligence is a highly relevant topic. Business Intelligence serves as an instrumental tool for decision-making support. It must be determined based on the quantity of information (Pour, 2005). These systems automate and organise data management (Dugas & Stankovic, 2012). Managerial choices in every sector of the economy can be informed by Business Intelligence outputs (Krsak & Tobisova, 2012). These tools are frequently utilised in numerous financial institutions, service providers, and industrial businesses (Pour 2006). In recent years, Business Intelligence tools, intended to enhance decision-making in organisations, have become a crucial component of management (Johansson & Sudzina, 2008). The BI system constitutes a multifaceted endeavour, encompassing technology and applications of information systems that significantly bolster the analytical and planning functions of firms and organisations (Pour & Slansky, 2004).

The marketing management process and the marketing mix may be intricate. Effective marketing planning necessitates intelligence not only on customers but also across a broad range of domains, including product lifecycle and supply chain. Strategic marketers face challenges in obtaining information from various sectors of the business for analysis and decision-making in their strategies. To commence an

outcome-based marketing initiative, access to comparison data is essential. Accessing comparative data that evaluates outcomes, utilisation, and profitability at the customer level is essential. Customer-level analysis facilitates subset analysis, yielding insights for specialised marketing (Rooney, 2004). By obtaining comparison data at the customer level, one gains access to financial, result, and detailed information via drill-down and drill-through activities of business intelligence (Teece, 1996). The data can be analysed through roll-up and roll-down views on several dimensions, such by salesperson, region, county, country, and more categories. Consequently, it is feasible to assess customer profitability, compare sales personnel performance versus established budgets, and possess data to substantiate the value of services alongside targeted marketing initiatives. Business Intelligence provides the requisite flexibility in information availability to facilitate informed decision-making.

Business Intelligence Procedure

Business Intelligence (BI) facilitates informed, data-driven decision-making within the organisation. The most compelling rationale for developing a new roadmap for business intelligence (BI) excellence is to eliminate the technological chaos and makeshift solutions that Information Technology (IT) has faced while attempting to fulfil business needs. Ranjan (2009) asserts that a Business Intelligence (BI) organisation maximally utilises data at each stage of the BI architecture as it undergoes various stages of informational transformation. Data is initially gathered, encompassing metadata such as the creator or originating system, the creation timestamp, the delivery channel, and the sentiment expressed in plain language, among other factors. Olszak and Ziemba (2006) assert that metadata enhance the extraction, transformation, and loading of data by delineating data sources in the structure of data warehouses. Metadata are utilised to automate the generation of summary data and the handling of enquiries. It is essential to guarantee that data is clean for utilisation. Venter and Tustin (2009) assert that the objective of a data warehouse is to furnish comprehensive, timely, accurate, and well-organised information for Business Intelligence (BI) analytical tools. Upon completion, the organisation can leverage the extensive data and present it to users in a comprehensible manner. Deliver predictive scores to customer support staff to ascertain which offers are most likely to produce a good result. Provide analysts with sophisticated visualisation tools to identify trends within millions of data sets. Deliver a dashboard to the Vice President of Marketing including social media sentiment scores related to the new product.

Olszak and Ziemba (2006) identified a diverse array of beneficiaries of Business Intelligence (BI) systems, including insurance businesses, the oil and mining sectors, security systems, banks, and supermarkets. Financial institutions are among the most prominent sectors employing Business Intelligence (BI) solutions, which also facilitate the evaluation of the profitability of both existing and prospective clients. This lays the groundwork for profitable sales and relationship banking, so optimising sales to high-value clients while reducing costs for low-value clients. This enhances profitability optimisation for innovative goods and services, hence improving value creation in the insurance industry.

Challenges of employing Business Intelligence in organisational performance

Business Intelligence (BI) applications have become the primary investment focus for many Chief Information Officers (CIOs), as noted by Chuah and Wong (2013), and have consistently represented the most essential technology to procure over the previous five years (Gartner, 2007). Notwithstanding the growing interest in Business Intelligence (BI), the efficacy of its deployment remains ambiguous. Johansson and Sudzina (2008) posited that approximately sixty percent of business intelligence systems fail owing to technological, organisational, cultural, and infrastructural obstacles. Moreover, EMC Corporation claimed that numerous Business Intelligence (BI) programs have faltered due to the lack of accessible tools for end users, resulting in inadequate fulfilment of their needs. Chuah and Wong (2013) describe the principal challenge facing Business Intelligence (BI) systems as the costs related to technology, maintenance, and implementation. The second challenge is the increasing number of business users utilising Business Intelligence (BI), especially as we move towards operational intelligence.

The final issue is to implement operational Business Intelligence using the newly accessible data sources. We are observing a significant rise in the volume of data (big data) being processed and stored in data warehouses and experimental fields. This data is utilised for sophisticated advanced, integrated, and streaming analytics. Contemporary data sets in Business Intelligence (BI) markedly diverge from conventional, more strategic or tactical approaches in BI. These significant obstacles give rise to the fourth issue, pertaining to the performance and scalability of

the ecosystem. The integration of operational personnel, operational Business Intelligence (BI), streaming analytics, and big data applications requires that performance be a primary focus for BI implementers, demanding sub-second response times for diverse operational intelligence enquiries while also accommodating more strategic or extended queries. Lupa (1997) suggests that a mixed workload scenario may result in performance problems.

Financial institutions face challenges from big data and must proactively manage and utilise corporate IT to remain competitive or gain an advantage. Corporate intelligence (CI) enables organisations to analyse extensive data to facilitate optimal corporate decision-making. Financial institutions can leverage their extensive databases to provide clear insights that enhance business performance and ensure regulatory compliance (Nemati, 2005). The applications of business intelligence in the financial sector are extensive. Although the Business Intelligence (BI) solution generally encompasses the requisite data for recognising improvement possibilities, considerable work is frequently needed to extract these insights. The work needed to locate relevant data points frequently surpasses the expense of acquiring them. Moldovan (2011) examined 23 financial sectors and identified problems, difficulties, and sources of uncertainty in mining financial data, particularly in ascertaining and confirming short-term trends.

Organisational Performance

This refers to the capacity to attain organisational objectives with greater effectiveness and efficiency. To achieve its objectives effectively and efficiently, an organisation must implement precise methods for assessing management performance. To achieve optimal performance, businesses must recognise the legitimate goals and needs of employees for career progression (Oginni & Omoyele, 2018). Harold (1994) asserts that improving employee performance to achieve organisational objectives can be achieved through suitable incentive systems, including both financial and non-financial rewards. Performance is a critical issue for all companies. The standing of a company within a certain industry, evaluated using several criteria such as gross sales, profit, market share, competitive advantage, and customer ratings. The performance of an industry within an economy is optimally evaluated by the time taken for completion and the costs incurred, relative to the initially anticipated timeline and financial budget, as observed by Bogdan (2011). The term performance will refer to a holistic concept that represents the results of organisational efforts. The effectiveness and efficiency will be assessed as components of performance.

In the views of Oginni and Omoyele (2018) performance revolves around the following deductions in brief. First, performance denotes the efficacy with which an individual executes a task or activity, as well as the capacity to achieve intended outcomes satisfactorily. Effective performance signifies achievement and progress. Second, organisational performance is viewed as a function of an organization's capacity to achieve and sustain equilibrium with its environment. Third, the performance dimension must be streamlined to establish explicit target settings. Quantifiable in both amount and time, and can be effectively recorded in an information system.

Sultan (1997) posits that corporate performance can be assessed through many metrics, including asset base, market share, quality, customer happiness, and profitability. He asserts that certain scholars have expressed pleasure with employing financial metrics to assess corporate success, citing the intensity and character of criticism aimed at traditional accounting methods, which are frequently detrimental to the review process. This study will assess organisational effectiveness through profit metrics.

Literature Review

Jane's research (2013) examines the "Adoption of Business Intelligence Dashboards and Decision Making at Kenya Power," emphasising that Kenya Power has continually excelled in the use of ICT and has made significant investments to fulfil its goals and objectives. An effective internal process substantially contributes to the development and success of any organisation. As a business expands, its data needs also increase. The aggregation and analysis of extensive data sets can be a laborious endeavour. The absence of data in the requisite format at the appropriate time may lead to postponed decision-making. The primary aim of the study was to analyse the advantages of the business intelligence dashboard, the obstacles associated with the BI dashboard system, and the performance ramifications of the new system at Kenya Power. A descriptive survey was conducted utilising a questionnaire and supplementary material. The personnel of Kenya Power completed and submitted the surveys. Qualitative data was collected and analysed utilising computational and statistical software. The research findings indicate that the BI dashboard system has significantly impacted the company and continues to improve business operations at Kenya

Power, despite several substantial difficulties that require attention.

The main aim of Afolabi's (2014) study is to illustrate the importance of adopting Business Intelligence (BI) technologies in Nigeria's higher education industry. The authors offer a methodology for the building and deployment of BI systems at higher education institutions, taking into account their specificities. The discussions focus on the goals and operational areas of BI in Higher Education. Consequently, in this context, the methodology utilised to exploit BI comprises two interrelated phases, specifically. Establishment of a data warehouse and subsequent analysis. A substantial segment of this paper is on elucidating the technology and its prospective benefits if used in the academic sector.

Richards (2014) contends that business intelligence tools have recently garnered significant interest from both scholars and practitioners. Nonetheless, the influence of business intelligence (BI) on corporate performance management (CPM) remains unexamined. To rectify this gap, we executed a comprehensive survey, gathering data from 337 senior managers. The partial least squares approach was utilised to analyse the survey data. Research indicates that the efficacy of Business Intelligence implementation is favourably associated with the efficiency of Corporate Performance Management-related planning and analytical functions. Notably, size and industry sector do not affect the relationship between BI effectiveness and the CPM. This study presents several implications for both philosophy and practice.

Anthony (2015) analysed how business intelligence empowers firms to sustain and develop distinctive competitive advantages by utilising the entire organisation and its networks to produce actionable insights about the environment, encompassing customers, competitors, regulators, technology, and other stakeholders. Given the current environmental shifts in the market, it is essential to examine the extent to which business intelligence methodologies enhance competitive advantage within the insurance sector. The research aimed to determine the correlation between the implementation of business intelligence and competitive advantage in Kenyan insurance companies. This study utilised a descriptive survey methodology. The research population comprised 43 regulated insurance firms in Kenya. Primary data was obtained through the dissemination of questionnaires. The participants included information technology managers, marketing managers, customer service representatives, finance managers, and sales and marketing personnel within the insurance sector. Descriptive statistics were employed to analyse the data, as this study was structured inside a descriptive framework. The mean scores of the Likert scale were utilised to assess the impact of competitive strategies implemented by enterprises. Furthermore, the researcher performed a multiple regression analysis. The results were displayed with tables and figures. The research revealed that several business intelligence strategies have been employed by insurance companies in Kenya to attain a competitive edge. Insurance firms in Kenya have numerous obstacles in utilising business analytics for competitive benefit. The research indicated that the implementation of business information across diverse organisational applications enhanced the competitive advantage of the involved entities. The research advises insurance companies to establish explicit Business Intelligence (BI) objectives that are congruent with the organisations' goals. The firm's objectives and mission Intelligence, aligned with its objectives, should constitute the cornerstone of the Business Intelligence (BI) strategy. Individual responsibilities should be defined at the project's outset. This study advocates for a deeper comprehension of the use of Business Intelligence (BI) technologies inside Kenyan insurance companies. Insurance companies in Kenya should investigate alternate techniques to optimise their utilisation of these systems.

Ruhollah et al. (2014) conducted a study entitled "Evaluation of Business Intelligence Systems on Organisation Performance with Balanced Scorecard Approach," emphasising the significance of information systems in contemporary society, particularly the necessity for managers to utilise systems in business intelligence and organisational performance management. The Board Information System was founded in 1994 in Switzerland to facilitate simultaneous economic expansion and the swift improvement of performance management and business intelligence. It is utilised to enhance efficiency, support management decision-making, execute business intelligence, analyse business traffic, and oversee performance within an integrated framework. This study examines the impact of Board information systems on organisational performance, concentrating on the financial, customer, internal process, and learning and growth dimensions. This research employs an empirical approach utilising both objective and descriptive-analytical methodologies. The attributes and functionalities of the Board information system are initially assessed

through literature and document analysis, followed by an evaluation of its impact on organisational performance via a focus group session and meta-analysis. The findings indicate that the Board information system positively and significantly influences the organisation, encompassing human resources empowerment, organisational structure and processes, risk mitigation, flexibility, communication, time efficiency, decision-making improvement, knowledge sharing, and its pertinence to organisational performance across financial, customer, internal process, and learning and growth dimensions.

The central emphasis is the influence of business intelligence on organisational effectiveness. The aforementioned dimensions were obtained from prior research undertaken by others in the field. The following subjects were analysed: the definition of business intelligence, the business intelligence process, the elements of business intelligence, the strategic significance and benefits of business intelligence, the challenges related to the application of business intelligence in organisational performance, business intelligence practices and competitive advantage, the assessment of business intelligence, competitive intelligence, and organisational performance. The topic was clarified by theoretical and empirical literature. Prior research indicates that the strategic significance of business information influences organisational performance in improving competitiveness, resolving consumer challenges, and promoting innovation.

Dijicks (2012) and Ponomarjovs (2013) both emphasised that data management presents considerable issues for banks. This data, according to Moldovan (2011), may cause confusion and difficulties. Nevertheless, Business Intelligence (BI) enables businesses to analyse and extract insights from this data (Olszak and Ziemba, 2006). The majority of research on this subject has been carried out in diverse places and across multiple business intelligence platforms, with few studies completed in impoverished nations, particularly in Nigeria. Kangogo (2013) contends that the dynamics of the business environment pose various challenges to multiple companies in Nigeria; this research seeks to fill the gap by examining the influence of business intelligence on organisational performance at Nestle Nigeria Plc.

Methodology

Research Design and Population

This study employed a descriptive research design to provide a thorough overview of the factors being investigated. In this study, business intelligence serves as the independent variable (Y), while organisational performance denotes the dependent variable (X). The study population comprised the Lagos office of Nestle Nigeria Plc, encompassing the following Heads of Department: production, purchasing, finance, marketing, and research & development. There are one thousand two hundred (1200) employees in the Cadbury Nigeria Plc office in Lagos. (Source: Student Survey, 2020). The sample size for this research was 150, representing 10% of the study population. A convenience and random sampling methods were employed to the sample size for the study in the designated area.

Mode of Specification
The formula is given as:
$Y = f(X)$
Where Y = Organizational Performance
F = Functional Relationship
X = Business Intelligence

Where
The model to be used is shown below:
$Y = b_1x_1 + b_2x_2 + b_3x_3 \ldots\ldots\ldots\ldots + u$
The simple linear form is stated below
$OP = \beta o + \beta_1 EI + \beta_2 CONSUI + \beta_3 COMPI + ei$

Where:

OP	=	Organizational Performance
EI	=	Environmental Intelligence
$CONSUI$	=	Consumer Intelligence
$COMPI$	=	Competitive Intelligence
μ	=	Error Term

Results and discussion

Hypotheses Testing

Research Hypothesis One: There is no relationship between environmental intelligence and organizational performance in Nestle Nigeria Plc**.**

Table 1 – Analysis Measuring the Relationship between Organisational Performance and environmental intelligence

		1	2	3	4	5	6
Organizational overall performance	Pearson Correlation	1					
	Sig. (2-tailed)						
Understanding the changes of Economic situation	Pearson Correlation	.217*	1				
	Sig. (2-tailed)	.017					
Understanding and using the new Technology	Pearson Correlation	.018	.106	1			
	Sig. (2-tailed)	.845	.251				
Understanding the social needs leads	Pearson Correlation	.144	.053	.104			
	Sig. (2-tailed)	.116	.563	.257			
Demographic and Psychological factors of customers information	Pearson Correlation	.140	.501	.290	1		
	Sig. (2-tailed)	.126	.000	.001			
Good knowledge and information about competitors	Pearson Correlation	.221	.427	.101	.281	1	
	Sig. (2-tailed)	.015	.000	.273	.002	.000	
Understanding the direct competition and indirect competitions' activities	Pearson Correlation	.097	.024	.286	.121	.487	1
	Sig. (2-tailed)	.291	.797	.002	.187	.000	.469
Good Knowledge and information about suppliers and distributors	Pearson Correlation	.014	.233	.074	.113	.000	.422
	Sig. (2-tailed)	.875	.010	.423	.220		.000

*. Correlation is significant at the 0.05 level (2-tailed).
Source: Author's Computation using SPSS 20.0, (2022).

Table 1 demonstrates a considerable positive correlation between overall organisational success and business intelligence. The correlation value between understanding changes in the economic condition and overall organisational performance is .217. The correlation value between understanding and utilising the new technology is .018. The correlation value between understanding social demands and business is .144. The correlation value between demographic and psychological factors of consumer information is .140. The correlation score for possessing comprehensive knowledge and information about competitors is .221. The correlation value between understanding the activities of direct and indirect competitors is .097. The correlation value between knowledge and information about suppliers and distributors is .014. Table 1 illustrates that the factors studied indicate a favourable correlation between business intelligence and overall organisational success. The variables exhibited statistical significance at the 95% and 99% confidence levels. This is a substantial association between business intelligence and overall organisational effectiveness. The null hypothesis is rejected; hence, the study concludes that a significant association exists between business intelligence and the overall performance of Nestle Nigeria Plc.

Research Hypothesis Two: Consumer intelligence does not have significant influence on organizational Market Share.

Table 2 – A Summary of the Multiple Regression Analysis of the Relationship between Consumer Intelligence and organizational Market Share

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.453	.205	.185	.484

*p<0.05 a. Predictors: (Constant), Business Intelligence
Source: Author's Computation using SPSS 20.0, (2022).

Table 2 of the model summary indicates a R^2 value of 0.205. This indicates that business intelligence positively influences organisational market share. This model predicts 20.5% of the variance in organisational market share by simultaneously considering all factors, indicating that 21% of the variance in market share for Nestle Nigeria Plc can be forecasted from the diverse business intelligence incorporated in the model.

Table 3 – Multiple Regression Analysis Showing Significance of Consumer Intelligence on organisational market share.

Model	Sum of Square	df	Mean Square	F	Sig
Regression	7.001	3	2.334	9.981	.000[b]
Residual	27.124	106	.234		
Total	34.125	109			

*p<0.05 a. Dependent Variable: organizational market share.
Source: Author's Computation using SPSS 20.0, (2022).

Table 3 indicates that the business intelligence factors utilised by Nestle Nigeria Plc strongly predict performance levels, $F(3, 116) = 9.981$, $p < 0.05$. The F-statistic demonstrates that the total regression model is statistically significant in terms of goodness of fit, since Ftab (3, 106) surpasses Fcal (9.981). As a result, the null hypothesis is dismissed. The research indicates that business intelligence has a substantial beneficial effect on the market share of Nestle Nigeria Plc.

Table 4 – Contribution of each Predictor on Organisation Market Share **variables**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	4.073	.788		5.167	.000
	Understanding the changes of Economic situation leads to market share in Nestle Nigeria Plc	.365	.111	.274	3.285	.001
	Understanding and using the new Technology leads to market share.	.441	.094	.392	4.682	.000
	Understanding the social needs leads to market share	.044	.095	.039	.465	.043
a. Dependent Variable: Business Opportunity						

Source: Author's Computation using SPSS 20.0, (2022).

Table 4 illustrates the contribution of the predictors. In this instance, comprehending and utilising the new technology results in business success, yielding a Beta value of .392, $p < .05$, and a t-value of 4.682. Comprehending the alterations in the economic landscape results in a business contribution with a Beta value of .274, $p < .05$, and a t-value of 3.285. Comprehending social requirements contributes to business success, with a Beta value of .039, $p < .05$, and a t-value of .465. The contribution is statistically significant to the business potential. Consequently, the null hypothesis is rejected, leading to the conclusion that business intelligence positively influences organisational market share at Nestle Nigeria Plc.

Research Hypothesis Three: There is no relationship between Business Intelligence and Competitive Advantage Nestle Nigeria Plc.

Table 5 – Correlations Analysis measuring the relationship between Competitive Advantage and Business Intelligence

		1	2	3	4	5	6	7	8
Competitive Advantage 1	Pearson Correlation	1							
Understanding and using the new Technology 2	Pearson Correlation	.092	1						
Technology should enhance the effectiveness of our overall performance 3	Pearson Correlation	.145	.018	1					
Understanding the social needs 4	Pearson Correlation	.210*	.104	.144	1				
Demographic and Psychological factors of customer's information are critical to business in Nestle Nigeria Plc 5	Pearson Correlation	.123	.290**	.140	.153	1			
Good knowledge and information about competitors 6	Pearson Correlation	.083	.101	.221*	.123	.281**	1		
Understanding the direct competition and indirect competitions, activities leads to organisation performance 7	Pearson Correlation	.322**	.286**	.097	.147	.121	.067	1	
Good Knowledge and information about suppliers and distributors 8	Pearson Correlation	.214*	.074	.014	.274**	.113	.422**	.487**	1
*. Correlation is significant at the 0.05 level (2-tailed).									
**. Correlation is significant at the 0.01 level (2-tailed).									

Table 6 demonstrates a considerable positive correlation between Competitive Advantage and Business Intelligence. The comprehension and use of the new technology exhibit a correlation coefficient of .092 with competitive advantage. The correlation value indicating that technology should boost the efficacy of our total performance is .145. The correlation score for understanding social demands is .210. The demographic and psychological components of client information are crucial to Nestle Nigeria Plc, with a correlation value of 0.123. The correlation value for knowledge and information about rivals is .083. The correlation value between understanding direct and indirect competition and organisational performance is .323, whereas the correlation value for possessing good knowledge and information about suppliers and distributors is .214. Table 6 illustrates that business intelligence is positively correlated with competitive advantage. The variables exhibited statistical significance at the 95% and 99% confidence levels. This is a substantial association between Business Intelligence and competitive advantage. The null hypothesis has been rejected. Consequently, the study shows that a substantial relationship exists between business intelligence and competitive advantage at Nestle Nigeria Plc.

The research investigated the impact of business intelligence on organisational performance at Nestle Nigeria Plc. First, there is relationship between business intelligence and environmental intelligence in Nestle Nigeria Plc. Second, consumer intelligence has significant influence on organizational Market Share. Third, there is relationship between business intelligence and competitive advantage in Nestle Nigeria Plc

The research indicated that the implementation of business intelligence in diverse organisational applications enhanced the organization's competitive edge. The aforementioned results indicate that business intelligence significantly enhances IT and Communication, business planning, process performance monitoring, enterprise resource planning, decision-making, compliance, risk mitigation, customer service, and collaboration platforms, while exerting a moderate influence on knowledge management, sales and marketing, and human resource management.

The research confirmed that the implementation of business intelligence has impacted the competitive advantage of organisations. The effects encompass business transparency, enhanced decision-making, time and cost efficiency, market share acquisition, product innovation, sales and revenue growth, op-

erational efficiency and performance, customer satisfaction, and positive stakeholder relations, including suppliers and customers, while business intelligence moderately fosters organisational motivation.

Conclusion

The study suggests that Business Intelligence (BI) systems contribute to value networks by providing not just financial advantages but also knowledge and other benefits. The survey affirmed that BI systems are a crucial expenditure that organisations must contemplate to maintain competitiveness.

A successful BI venture is evaluated based on its effectiveness in meeting the objectives established by organisations. The report proposes that organisations establish defined business intelligence objectives that fit with the company' goals. The aims and mission of the BI, along with its alignment to corporate goals, should constitute the BI strategy. Roles for individuals should be defined at the project's inception. This will encompass the IT team, BI users, analysts, and management support. The acquisition and development of the BI tool/asset should be overseen by a comprehensive executive steering committee while being executed by a project team. Consultants also have a significant role during the construction phase. The study advocates for increased awareness regarding the utilisation of Business Intelligence (BI) and emphasises the necessity for organisations to train their personnel in the optimal application of BI systems to ensure effective use for maximum benefit and to achieve a competitive advantage based on the value derived from business intelligence.

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GOVERNMENT SUPPORT AND RENEWABLE-ENERGY INVESTMENT IN KAZAKHSTAN

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Abstract.
Purpose. To evaluate how Kazakhstan's renewable-energy (RE) support policies have influenced private-sector investment and to identify persisting barriers that could prevent the country from reaching its 2030 and 2050 green-transition targets.
Design/methodology/approach. A qualitative content-analysis was performed on thirty-eight Kazakh RE laws, decrees and strategic programmes issued between 2009 and 2024. These primary sources were triangulated with fifteen multilateral assessments (ADB, EBRD, IEA, IRENA, UNDP) and twenty-two peer-reviewed studies. Manual thematic coding (Bowen, 2009; Braun & Clarke, 2006) generated six analytical themes: policy stability, financial incentives, regulatory efficiency, investor trust, grid integration and international cooperation.
Findings. Feed-in tariffs (FITs) and competitive auctions have effectively decreased price volatility, bringing down the average solar and wind strike prices by approximately 40%. However, three structural bottlenecks – intermittent tariff revisions, high domestic borrowing costs and grid congestion in the resource-rich south – continue to depress investor confidence.
Originality. This is the first English-language study to synthesise the full 2009-2024 Kazakh policy corpus and systematically map perceived investment barriers to specific legal instruments in a post-Soviet context.
Keywords: renewable energy, policy support, investment climate, Kazakhstan, qualitative analysis.

Introduction

Kazakhstan – ranked ninth globally by land area – remains Central Asia's economic heavyweight, owing largely to abundant coal, oil and natural-gas reserves. Fossil fuels accounted for 84 % of national primary-energy supply in 2023 (IEA, 2023). The carbon-intensive profile contrasts sharply with the global decarbonisation push and Kazakhstan's own international commitments. In 2016 the Republic ratified the Paris Agreement (UNFCCC, 2015), pledging to reduce economy-wide greenhouse-gas emissions by 15 % below 1990 levels by 2030. Two flagship road maps as concept for Transition to a Green Economy (2013) – set a 10 % renewable-electricity target for 2030 and 50 % for 2050 and Kazakhstan-2050 Strategy (2014) – embedded these energy aims in a broader socio-economic agenda.

Yet progress has been modest. At the end of 2024, renewables generated only 6.4 % of national electricity (IEA, 2024), well below the interim trajectory needed for the 2030 milestone. To stimulate clean-energy investment, the government implemented four main policy instruments such as Feed-in tariffs (FITs) – introduced under the Law on Supporting the Use of Renewable Energy Sources (2009), guaranteeing offtake at technology-specific tariffs and Tax incentives – exemption from VAT and customs duties on imported RE equipment (2012) and a corporate-income-tax holiday for early-stage projects (2018 amendment).

Competitive auctions – launched in 2018 to replace FITs gradually and lower costs via market discovery.

Concessional loans – routed through the Development Bank of Kazakhstan (DBK) at softer terms than commercial finance.

A prima-facie assessment suggests partial success: auction strike prices for utility-scale solar PV fell from USD 0.19 kWh in 2018 to USD 0.11 kWh by mid-2022

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(MEGNR, 2019; 2022), while cumulative installed RE capacity grew from 190 MW (2013) to 3.2 GW (2024). Nevertheless, multiple projects were delayed or downsized, and foreign-direct-investment (FDI) inflows into renewables have plateaued since 2021.

Scholarly commentary is divided. Optimistic accounts emphasise Kazakhstan's improving regulatory clarity and regional leadership in auctions (Aitken et al., 2020). Pessimistic analyses highlight three unresolved bottlenecks: (i) tariff volatility during the 2013-2015 currency devaluations; (ii) under-capitalised local banks unable to extend long-tenor project loans; and (iii) a Soviet-era grid concentrated in the coal-rich north, forcing southern solar farms to curtail output (Bissenova, 2022).

Research gap and objective. Existing literature either chronicles policy milestones or examines single case-studies (e.g., a specific 100 MW wind farm). Comprehensive, document-based thematic analysis covering the entire 2009-2024 corpus–and explicitly linking each instrument to an investment barrier–is absent. This paper fills that gap.

How effective are Kazakhstan's government support mechanisms in mobilising renewable-energy investment, and what barriers still prevent the country from achieving its green-transition targets?

By answering, we contribute to (1) practical policy design for emerging-market decarbonisation and (2) theory on institutional impediments to energy transitions in post-Soviet economies.

Literature review

The review is structured in four blocks: (A) global policy instruments, (B) finance and risk, (C) post-Soviet institutional context, and (D) Kazakhstan-specific scholarship. Parts A and B are provided in this segment; Parts C and D appear at the start of Part 2. The review emphasizes how reliable incentives, accessible financing, and strong grid infrastructure all work together to shape the success of renewable energy investments.

Global policy instruments. The past two decades have delivered an extensive empirical record on how policy design shapes renewable-investment flows. Three stylised facts emerge: Long-term revenue certainty lowers risk premiums. Feed-in tariffs (FITs) and contracts-for-difference (CfDs) guarantee developers a predictable cash flow, reducing the cost of capital by 300-600 basis points in emerging markets (Jenner et al., 2013).

Auctions outperform administratively set tariffs when calendars are regular and pre-qualification strict. Meta-analyses of 95 national auction schemes show average cost reductions of 38 % over the first six rounds when governments publish multi-year pipelines (IRENA, 2019).

Retroactive changes destroy confidence quickly. Spain's 2013 FIT claw-back and Czechia's 2011 solar levy caused multi-billion-dollar arbitration cases and a 75 % collapse in new investment within two years (Steffen, 2018).

Finance and risk perception. Beyond headline borrowing costs, the finance literature distinguishes between nominal and effective cost of capital. High real interest rates in emerging markets interact with exchange-rate volatility to create what BloombergNEF (2021) calls a "double premium." Kazakhstan illustrates the pattern vividly: the tenge lost about fifty percent of its value during the 2014-2015 devaluation cycle and a further seventeen percent during the 2020 oil-price collapse. When McCrone et al. (2022) modelled a 100-MW solar project under local-currency versus hard-currency finance, the levelised cost of electricity (LCOE) diverged by nineteen US-dollars per megawatt-hour even though the feed-in tariff was identical in real terms. Currency mismatch on its own can wipe out the benefits of two entire auction rounds.

Developers respond by adopting four main risk-mitigation tactics. First, they negotiate dollar- or euro-indexed PPAs that transfer foreign-exchange risk to the offtaker; this can cut interest-rate spreads by 150-200 basis points, but it is politically sensitive because retail tariffs are capped in tenge. Second, sponsors seek cover from export-credit agencies such as Germany's Euler Hermes or China's Sinosure. An ECA wrap often pushes a project's rating toward investment grade, yet the additional diligence typically adds half a year to the timeline and seldom covers more than seventy percent of the senior debt. Third, project owners co-finance with multilateral senior tranches-EBRD, ADB or IFC-as a signalling device that crowds in commercial mezzanine. While effective, this blended-finance route remains capped by limited concessional envelopes and comes with complex covenant stacks that many local banks find burdensome. Fourth and finally, some sponsors simply front-load equity, raising their share above thirty percent to reduce debt exposure; the obvious trade-off is a lower internal rate of return.

Taken together, these tactics confirm Steffen's (2018) core argument: tariff design alone is not enough. Without credible macro-financial architecture-stable inflation targeting, deeper local bond markets, and affordable hedging instruments-the risk-

adjusted cost of capital will continue to constrain Kazakhstan's renewable build-out.

Institutional context in the post-Soviet space. Most Commonwealth of Independent States (CIS) inherit grid assets and regulatory templates from a single, vertically integrated Soviet power system. Transmission infrastructure remains state-monopolised and dispatch codes are calibrated for baseload coal and gas rather than variable renewables. Scholars talk about three problems in institutions that come from this history.

First, permitting complexity: utility-scale projects must navigate regional akimats, two national ministries and at least one state-owned grid operator; legal competence is fragmented and paperwork heavy. Second, tariff socialisation: politically capped retail prices limit the scope for fully cost-reflective wholesale tariffs, placing upward pressure on subsidies or corporate off-taker balance sheets. Third, fiscal rigidities: because hydrocarbon rents dominate public budgets, reallocating subsidies from fossil fuels toward clean energy faces entrenched political resistance.

Georgia's experience offers a counter-narrative. The country unbundled generation and transmission in 2004, introduced dollar-indexed PPAs for renewables, and cleared a two-gigawatt pipeline by 2020-all while maintaining macro-financial stability. The Georgian case demonstrates that institutional reform can overcome Soviet-era constraints when political commitment aligns with credible macro-economic policy.

Kazakhstan-specific scholarship. Kazakhstan's academic literature can be divided into three main streams, each offering valuable insights but also having their own limitations in scope.

Policy chronologies document every legislative milestone, from the 2009 FIT law to the latest auction decree. Key sources include annual bulletins by the Ministry of Ecology, Geology and Natural Resources (MEGNR, 2019) and legal-database digests issued by the Ministry of Justice (MoJ, 2017). These chronologies are invaluable reference points yet remain largely descriptive, seldom probing causal mechanisms.

Project case-studies drill into individual assets such as the 50-MW Burnoye Solar-2 plant examined by Aitken et al. (2020). While rich in technical and financial detail, they often extrapolate macro-level conclusions from micro-level evidence. Currency volatility, for instance, shaved three percentage points off Burnoye's internal rate of return-important for that project, but not necessarily generalisable.

Barrier diagnostics rely on stakeholder surveys. The UNDP (2021) study of thirty-six investors ranks grid curtailment and loan tenor as the top two constraints. Such diagnostics are persuasive yet static snapshots; they seldom trace how barriers evolve as new policies roll out.

What the literature lacks is an integrated, longitudinal analysis that (a) spans the full 2009-2024 documentary window, (b) triangulates domestic legal texts with external evaluations, and (c) assigns each instrument to the six thematic barriers outlined earlier. Addressing that comprehensive gap is the motivation behind the present research.

Methodology

A qualitative, interpretivist design is chosen because policy meaning and investor perception are socially constructed and cannot be fully captured by quantitative indicators alone. Document analysis enables longitudinal tracing of regulatory change, while triangulation with multilateral and academic sources mitigates single-document bias.

Primary corpus (n = 38) – full texts of laws, decrees, auction regulations, strategy road-maps (2009–2024). Each document downloaded in original Russian/Kazakh, machine-translated to English, then manually checked by a bilingual reviewer.

Secondary corpus (n = 37**)** – fifteen multilateral reports (ADB, EBRD, IEA, IRENA, UNDP) and twenty-two peer-reviewed articles indexed in Scopus or WoS. Inclusion criteria: deals explicitly with Kazakhstan RE policy or investment and published 2013–2024.

Coding strategy

Following Bowen (2009), a three-round coding protocol was adopted:

Open coding – researchers independently labelled text fragments; emergent codes were tabulated (367 raw codes).

Axial coding – raw codes clustered under six parent-themes established from literature: policy stability, financial incentives, regulatory efficiency, investor trust, grid integration, international cooperation.

Selective coding – narrative synthesis linked themes to investment behaviour Inter-coder reliability on a 10 % random subsample achieved $\kappa = 0.86$, meeting "substantial" agreement thresholds. NVivo 14 allowed for organizing and storing codes, but interpreting and making sense of the data required manual effort.

Triangulation – multiple data types (laws, reports, academic studies).

Audit trail – all code decisions logged; corpus publicly archived via Zenodo (DOI provided upon acceptance).

Results and discussion

Thematic results are presented in order of explanatory weight, as assessed by frequency of coded references and corroboration across sources.

Policy stability. Findings. The 2009 FIT regime guaranteed offtake for 15 years but denominated tariffs in tenge. When the national currency depreciated by 50 % in 2014-2015, Cabinet Resolution 271 revised FIT coefficients downward, triggering project delays and two ICSID arbitration notices. Auction regulations (2018) ostensibly rectified this by pegging tariffs to the exchange rate on bid day and indexing to CPI; however, annual auction volumes fluctuated: 300 MW tendered in 2019, only 180 MW in 2021, despite a 300 MW schedule (MEGNR, 2019; 2022).

Interpretation. Investor interviews compiled by EBRD (2022) show risk premia remain 250 bps above those in Uzbekistan, whose PPAs are USD-indexed. Policy credibility thus improves but remains partially discounted.

Financial incentives

Findings. Median solar strike prices fell from USD 0.19 to USD 0.11 kWh (−42 %) between the first and fourth auction rounds; wind dropped from USD 0.056 to USD 0.035 kWh (−37 %). Yet commercial debt costs exceed 13 %. DBK's concessional loan window (USD 400 million) is fully allocated, leaving new projects reliant on foreign lenders at LIBOR + 6–8 %. This wipes out ~30 % of the tariff gain.

Interpretation. Cost-of-capital, not energy-resource quality, forms the binding constraint. Without parallel financial-sector reforms. Green-bond markets and risk-sharing facilities, for instance, require more than lowering tariffs to support fast growth in capacity.

Regulatory efficiency. Detailed permit timelines reveal a median of 412 days from land-lease application to commercial-operation date for projects < 50 MW, versus 270 days regional benchmark (UNDP, 2021). Bottlenecks reside in the cadastre (land rezoning) and technical-conditions (grid connection) stages. Absence of a one-stop digital portal forces paper submissions to five separate offices.

Investor trust. Survey data from UNDP (2021) shows that about 63% of international respondents still see Kazakhstan as a medium-risk country compared to its regional neighbors. They often point to the 2015 retroactive FIT haircut as a key reason why they feel that way. Establishment of an emissions-trading system in 2018 improved rankings marginally but not enough to reclassify the market as low-risk.

Grid integration. KEGOC's north-centric 500 kV backbone forces southern PV farms to curtail at peak generation; curtailment averaged 8.7 % of potential output in 2022, up from 4 % in 2019. Battery-storage pilots are confined to a 10 MWh demo plant near Almaty. Transmission upgrades totalling USD 1.8 billion are planned but unfunded.

International cooperation. Kazakhstan's renewable build-out has relied on three principal multilateral programmes. First, the Renewable Energy Framework arranged by the European Bank for Reconstruction and Development (EBRD) together with the Green Climate Fund provides a credit envelope of roughly USD 500 million in senior loans and risk-sharing instruments; between 2018 and 2023 it financed seven utility-scale plants totalling about 830 MW. Second, the Asian Development Bank's Solar Power Support Facility–backed by a USD 200 million sovereign guarantee–has underwritten three photovoltaic parks (≈ 270 MW). Third, the Regional Green Economy Facility managed by UNDP and co-funded by JICA supplies around USD 90 million in blended grants and concessional loans; to date it has supported Kazakhstan's first grid-friendly battery-storage pilot (10 MWh near Almaty).

Together these programmes have supplied roughly 30 percent of total utility-scale capital expenditure. Project developers commend the EBRD's standardised PPA template for lowering due-diligence costs, but also note that donor environmental-and-social safeguards lengthen approval timelines by six to nine months. Misalignment persists–for instance, Kazakh law exempts projects below 50 MW from a full environmental-impact assessment, whereas multilateral lenders still require one–leading to duplicated procedures and higher transaction costs.

This synthesis weaves together the six thematic findings–policy stability, financial incentives, regulatory efficiency, investor trust, grid integration and international cooperation–to explain why Kazakhstan's headline progress (falling tariffs, quadrupled capacity) co-exists with stalled investment momentum. It then situates those dynamics in the broader theoretical debates on energy transitions in resource-dependent economies.

Interdependence of incentives and institutions. At first glance Kazakhstan has ticked every policy box: a feed-in-tariff (FIT) era to kick-start the market, technology-specific auctions to lower costs, tax breaks to sweeten early cash-flows, and concessional credit lines to relieve borrowing costs. Yet the three most-frequent investor complaints–tariff volatility, expensive debt and curtailment risk–each trace back to institutional domains that lie outside the energy ministry's remit as Macroeconomic policy: The 2013–2015 currency devaluation, which forced a 22 % FIT haircut, originated in central-bank and fiscal choices unrelated to renewables.

The 13% commercial loan rate primarily indicates underlying risks within the banking sector, such as non-performing assets and limited bond market activity, rather than being directly driven by energy policy.

Grid governance: Transmission planning and financing fall to KEGOC, a state-owned monopoly with its own budget constraints and political oversight.

This supports what Steffen (2018) argued: policy tools only work as trustworthy signals when the supporting institutions are strong. Absent that alignment, risk premiums remain high even when tariff design is world-class.

Qualitative coding revealed that a single event–the 2015 retroactive FIT cut–still shapes investor sentiment in 2024. Foreign developers still tend to increase their required return by about 2 to 3 percentage points when working on projects in Kazakhstan, even after legal protections are in place. This finding extends the notion of the credibility premium beyond advanced economies (e.g., Spain, Czechia) to a post-Soviet context, illustrating path dependence in policy risk: once credibility is lost, multiple cycles of consistent behaviour are required to restore it.

Financing as the new bottleneck. Cost-of-capital now eclipses tariff design as the dominant constraint. With solar strike prices at USD 0.11 kWh–near regional best practice–further tariff declines yield diminishing returns. By contrast, reducing debt pricing from 13 % to 9 % would cut LCOE by roughly USD 15 MWh, more than the last two auction rounds combined. This re-weights policy priorities toward green-finance architecture: credit guarantees, currency-hedge facilities, tenge-denominated green bonds and Basel-aligned risk weightings for RE loans.

Grid readiness as a overall limit. Curtailment currently averages around 8.7%, with projections suggesting it could rise above 12% by 2027 if no upgrades are made. This points to a looming limit on market growth similar to the surge seen during Vietnam's solar boom in 2019.Grid saturation converts technical constraints into financial risk by undermining revenue certainty. Hence, transmission and storage investments are no longer "nice-to-have" but are pre-conditions for the next investment wave.

The study also points out that investor confidence in auction PPAs depends heavily on their trust in the dispatch rules. A tariff that's accurately priced doesn't hold much value if energy can't be reliably supplied. Grid policy is therefore endogenous to perceived tariff risk–another illustration of cross-domain interdependence.

Role of international partners–catalyst yet insufficient. Multilateral frameworks (EBRD, ADB, UNDP/JICA) finance about 30 % of capex and import global standards–standardised PPAs, environmental safeguards, financial due-diligence. Developers praise these features but criticise duplicated approval timelines caused by misaligned safeguards. The implication is twofold such as Catalytic but partial – concessional funds lower early risk but cannot scale the market alone and Norm-diffusion depends on domestic absorption capacity – until national EIA laws converge with donor rules, duplicated reviews will remain a hidden transaction cost.

Implications for theory and practice. Theoretically, Kazakhstan exemplifies the "resource-trap paradox" in energy transition studies: a hydrocarbon-rich state can legislate ambitious green targets and sophisticated incentives, yet investment stalls unless macro-financial and grid institutions co-evolve.

The synthesis emphasizes several key areas for future reforms. (i) locking-in credibility through legal insulation of tariff indexation, (ii) crowding-in low-cost domestic capital via green-bond frameworks and credit guarantees, and (iii) ring-fencing grid-upgrade budgets through transparent, performance-based PPPs.

Without such system-level interventions, incremental tweaks–e.g., marginal tariff adjustments–will deliver limited additional capacity and risk missing the 2030 10 % renewable-electricity milestone.

Conclusion

This study looked at how well Kazakhstan's renewable energy policies are working and tried to identify what's stopping investment from happening. A careful qualitative analysis was performed on thir-

ty-eight key legal documents, cross-referenced with thirty-seven external sources, following a detailed thematic coding approach to ensure thoroughness and accuracy.

Feed-in tariffs and auctions demonstrably lowered strike prices (solar −42 %, wind −37 %) and catalysed a four-fold capacity increase (0.8 GW → 3.2 GW, 2015-2024). Three structural impediments persist–policy volatility remnants, high cost-of-capital (13 % local debt), and north-weighted grid congestion causing up to 9 % curtailment. International co-finance covers 30 % of capex but could scale if domestic permitting and grid bottlenecks are addressed. Lock in PPA indexation clauses and publish a three-year rolling auction calendar; avoid ad-hoc capacity adjustments. Expand DBK's concessional window, enable tenge-denominated green bonds under IFRS-aligned disclosure, and pilot credit-guarantee schemes for local banks. Launch a one-stop e-portal integrating land, cadastre and grid-connection approvals with statutory deadlines (< 120 days). Ring-fence KEGOC's USD 1.8 billion transmission plan within a public-private partnership and deploy at least 200 MWh battery capacity by 2027. Harmonise national EIA thresholds with multilateral standards to eliminate dual review.

This study is constrained by the absence of first-hand stakeholder interviews. The research team attempted a virtual interview campaign in March 2024 but achieved a response rate below 20 %–insufficient for thematic saturation. Consequently, perception analysis relies primarily on UNDP's 2021 investor survey and EBRD consultation minutes. This introduces a potential time-lag bias: investor sentiment may have evolved after the 2022–23 auction rounds. Triangulation with thirty-eight legal documents and fifteen multilateral reports mitigates the risk of single-source dominance; nonetheless, future work should incorporate a Delphi or mixed-method survey once travel and access constraints ease. Finally, because the study centres on Kazakhstan, institutional findings may not fully transfer to other post-Soviet grids without additional comparative cases (e.g., Georgia or Uzbekistan).

Future research could pair this qualitative map with econometric panel analysis once more granular investment data emerge, and could integrate stakeholder interviews to refine perception metrics.

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HOUSEHOLDS' ABSORBABILITY AND ADAPTABILITY COPING CAPACITY TO THE IMPACT OF FLOOD DISASTER IN ILE-IFE, NIGERIA

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Abstract.
Purpose. The purpose of this study is to examine households' absorbability and adaptability coping capacities in response to flood disasters in Ile-Ife, Nigeria. The research seeks to understand how coping strategies vary across different residential zones and how socioeconomic characteristics influence these variations.
Design/methodology/approach. Residential areas in Ile-Ife were stratified into three developmental zones: core, transition, and suburban. Using a multistage sampling technique, a total of 493 household heads were selected. Data were collected and analyzed to assess households' coping capacities in relation to flood hazards.
Findings. The results revealed that both absorbability and adaptability coping capacities differed significantly across the three zones. These variations were strongly influenced by the socioeconomic characteristics of household heads. The suburban zone, in particular, demonstrated weaker adaptability, highlighting the vulnerability of residents in this area.
Originality. This study contributes to disaster risk reduction literature by providing empirical evidence on the relationship between socioeconomic characteristics and coping capacity in a flood-prone Nigerian city. It emphasizes the need for targeted policies, especially in suburban areas, to improve pre-disaster management activities, such as identifying flood-prone locations and issuing early warnings to residents.
Keywords: Flood Disaster, Coping Capacities, Households, Ile-Ife, Resilience.

Introduction

Over the years, countries of the world have experienced the impact of climate change as evident in the magnitude and frequency of extreme weather hazards, one of which is flood (World Bank, 2013; Maddox, 2014; Monier & Gao, 2015). Flood hazard is the coverage of water in an environment that is not normally covered by water and with potentials of causing harms to urban environment (Odunsi, 2020). When the impacts are significant, a flood hazard become flood disaster. The global escalation of flood disaster, however, has made them an existential societal concern and a threat to the achievement of sustainable environment.

Recently, there has been noticeable rise in the magnitude and frequency of flood disaster with wide reaching impact on households and community members in both developed and developing countries (World Bank, 2015; Adelekan & Asiyanbi, 2016; Shah et al., 2018; Hofmann & Schuttrunp, 2019). In the last decade, more than 105 million people in the world have been affected by flood disaster with fatalities, displacement of people and destruction of infrastructure (CRED & UNDRR, 2020; UNISDR, 2022; Mobolaji et al., 2025). While flood disaster

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is an experience globally, the developing countries, particularly those in sub-Saharan Africa, are disproportionately vulnerable to the impact of disaster.

In Nigeria, for instance, floods is the most common disaster and the impact is similar to the experience in other developing countries (Amangabara & Obenade, 2015; Komolafe et al., 2015; World Economic Forum, 2019). Vulnerability of Nigerian cities to flood disaster is a reflection of several factors. These include uncoordinated urban planning, illegal building on river setbacks and waste dump on drainage channels (Daramola & Mobolaji, 2024). However, the Federal Government of Nigeria have made some efforts to manage flood disaster in the country. Among these efforts are the promulgation of statutory laws and policies, and relocation of flood disaster victims to internally displaced camps [IDPs] during flooding, among others. In spite of these efforts, approaches to disaster management remain largely pedestrian in the country (Odunsi et al., 2024). This is because Government efforts have always been a reactive approach. Households as primary receptor of the impact of flood disaster therefore must be resilient.

Households' resilience to flood disaster is the ability of households or individual occupying the same dwelling to absorb, adapt and transform in response to the impact of disaster (Herrman et al., 2011; Kien, 2011; Lucini, 2014). In another parlance, resilience to disaster is the effort of households to evolve coping capacity in order to sustain their living standard for preparation and mitigation of disaster. Operationally, households' resilience to flood disaster is the enablement of a household to evolve absorbability and adaptability coping capacity to the impact of flood disaster. It emphasizes proactive and reactive approaches to cope with the impact of flood disaster.

In managing the impact of flood disaster, household should be able to evolve absorbability and adaptability coping capacity (Folke et al., 2010; Rossi et al., 2012; Patryniak, 2016). Absorbability is the capacity of the households to take intentional protective action to buffer flood disaster. On the other hand, adaptability involve households' capacity for flexibility and incremental adjustment by changing conditions due to flood disaster. This suggest that coping with flood disaster involve actions, flexibility and adjustment before and after flood disaster. However, while several studies have documented disaster resilience capacity, studies on households' resilience, particularly regarding absorbability and adaptability coping capacities in traditional cities of developing countries such as Nigeria, are scanty in the literature.

Ile-Ife, an urban centre with extensive traditional areas and rapidly growing suburbs has a history of flood disaster. Historically and into present, Ile-Ife suffer from devastating floods, even in recent years, with many residents in Ede Road, Mayfair, Aserifa, and Road 7 area experiencing severe flooding causing significant and extensive havoc to both lives and properties (Afolabi et al., 2024). Therefore, households in these areas should be able to absorb and adapt to flood disaster as they continue to live in these areas despite the perennial flood disaster and impact. Moreover, coping with the impact of flood disasters is key in building flood disaster resilient cities because human activities at the household level make significant contributions to make or mar the city. This study therefore examined households' absorbability and adaptability coping capacity to the impact of flood disaster in Ile-Ife, Nigeria.

Literature review

The impact of flood disaster on households and community members is gaining momentum in global and local discourses. In Nigeria, particularly Ile-Ife, a traditional and urbanized city, there have been flood disaster causing fatalities, displacement and physical and economic losses (Ijaware, 2020; Iyiola, 2024). The level of impact of flood disaster on households in Ile-Ife thereby raises concerns about households' absorbability and adaptability coping capacity, hence this study.

Studies have shown that socio-economic characteristics of households constitute a significant determinant of coping capacity to the impact of disaster (Akter & Mallick, 2010; Keating et al., 2020; Odunsi, 2020). For instance, Keating et al. (2020) indicated that income level enhance coping capacity to the impact of oil spills in South Louisiana. In this case, poor rural residents tend to have less coping capacity in comparison with the middle-income urban residents. Also, Akter and Mallick (2010) indicated that low-income households were less resilient to the impact of flood disaster than high-income households in Bangladesh. This suggest that socioeconomic characteristics reflects in coping capacity to disaster. Although, these studies focused on different types of disaster which was conducted in developed countries, the significance of socioeconomic characteristics is key in this study.

Literature also abounds on diverse components and dimensions of disaster resilience (Bene et al., 2012; Lucini, 2014; Bangalore et al., 2017). Bene et al. (2012) identified physical, natural, physical, insti-

tutional, social and economic dimension of households as coping mechanism to disaster. In the same vein, Bangalore et al. (2017) identified components of resilience as mitigation, preparedness, response and recovery. The components indicate stages of adaptation and recovery of victims. However, despite different components of disaster resilience, absorbability and adaptability overlapping coping capacity have been applied in different disaster resilience contexts studies and the components were both short- and long-term recovery outcomes. Thus, due to the significance and importance of the coping capacity, it is pertinent to assess households' resilience to flood disaster based on absorbability and adaptability coping capacity in a traditional city of Ile-Ife, Nigeria.

Methodology

The study area, Ile-Ife is one of the prominent traditional and urbanized cities in Osun State, Nigeria (Figure 1 and 2). The city lies between latitudes 7°28′N and 7°45′N and longitudes 4°30′E and 4°34′E with average elevation of 268m above sea level. Ile-Ife with its long history of tradition, culture and art is regarded as the origination of Yoruba ethnicity in Southwestern Zone of Nigeria. With two of its local government areas located in the metropolis (Ife Central and Ife East), the town experienced tropical climate with an average annual temperature of 21.3ºC and annual rainfall of 1509mm. Evidence of urbanization in the city dates back to 500 AD (Mabogunje, 1968).

Over the years, human activities and urbanization have taken quite toll of high forest vegetation in Ile-Ife. Out of the 21 wards in the LGAs of Ile-Ife, 17 wards are in the built area of the city. In the same vein, urbanization has further enhanced and supported human activities in the city. Typical examples are the increasing demand for trees to build factories, shopping complex and residential buildings. Demand for trees in terms of deforestation coupled with uncontrolled urban growth have culminated to flood disaster. For instance, the deadly 2020 flood disaster in the city were attributed to deforestation and victims building on river setback (Ijeware, 2020). This suggest that the city is susceptible to flood disaster as a result of nature and human activities. Therefore, households must evolve coping capacity to the impact of flood disaster especially in the three developmental zones (core, transition and suburban) of the city. Households in the developmental zones of the city have differential social, economic and physical attributes but with varying degrees of resilience to flood disaster (Daramola et al., 2022).

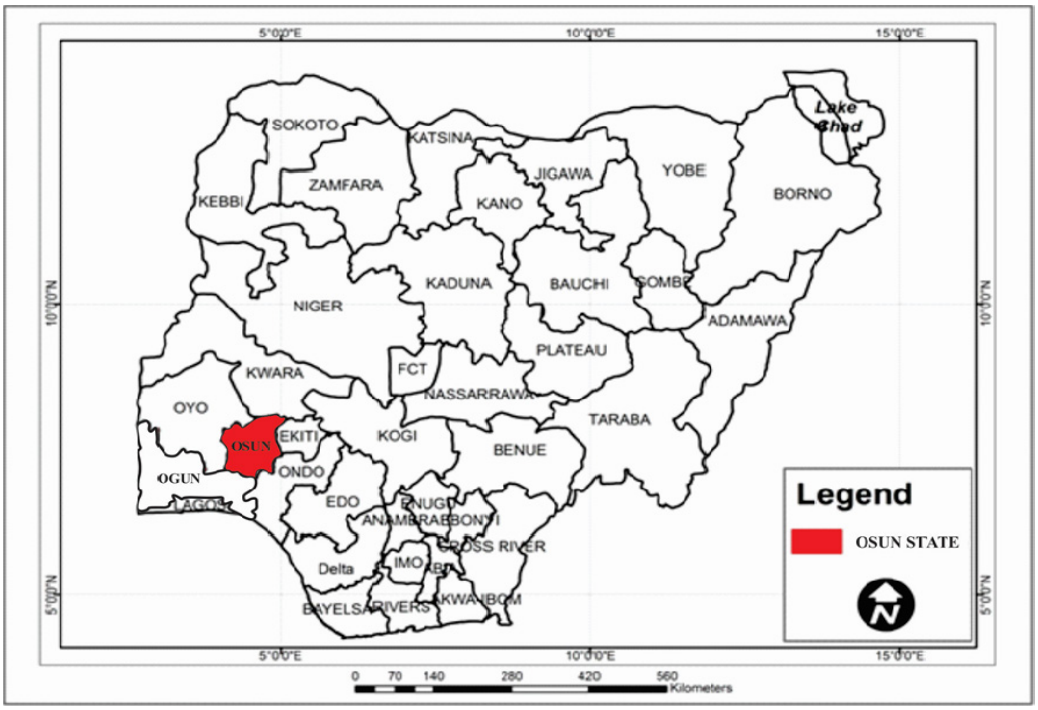

Figure 1 – Map of Nigeria Osun State Showing Ife East and Ife Central LGA
Source: National Space Research and Development Agency [NARSDA], (2024)

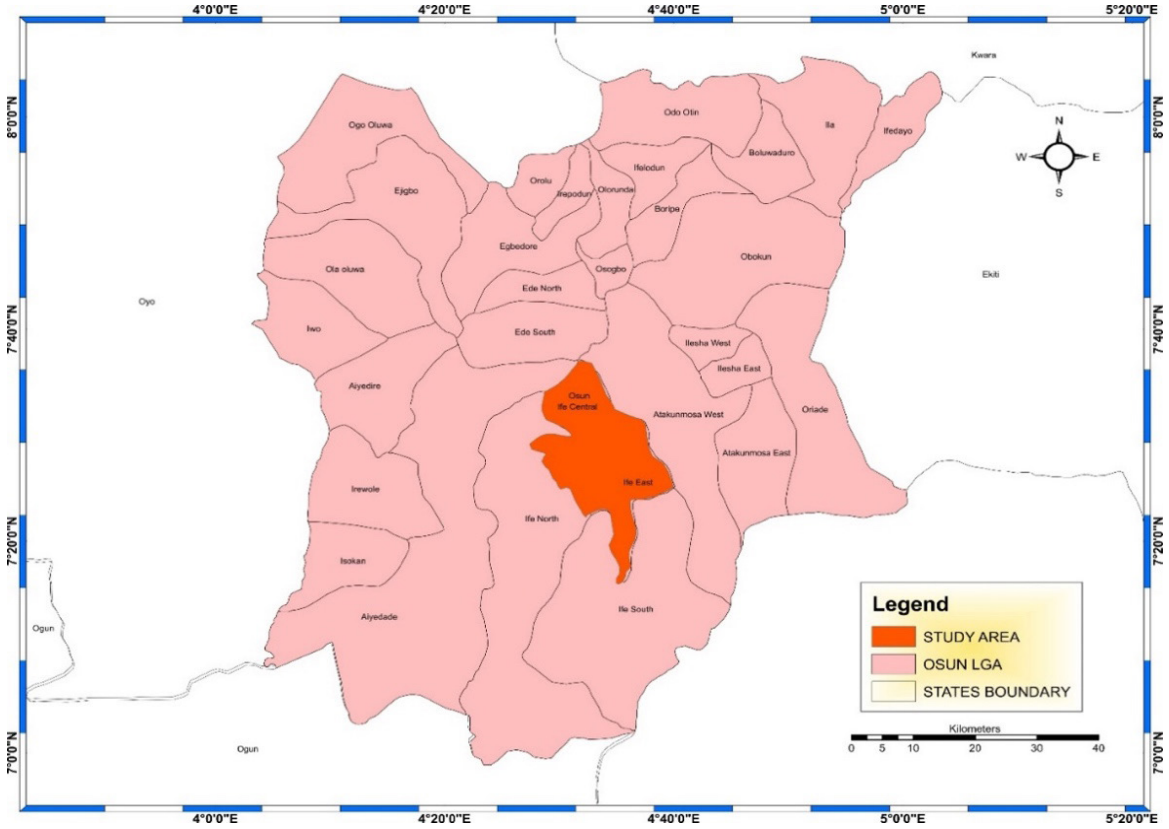

Figure 2 – Map of Osun State Showing Ife East and Ife Central LGA
Source: National Space Research and Development Agency [NARSDA], (2024)

Data for the study were based on field survey through administration of questionnaire on the residents of Ile-Ife. The residential areas in Ile-Ife were stratified into core, transition and suburban developmental zones. Due to homogeneity, one residential area was randomly selected in each of the zones. Also, systematic sampling method was employed in selecting households' heads for questionnaire administration from the three zones. Thus, a total of 493 respondents were sampled across the three zones. These comprise 181 in the core zone, 148 in the transition zone and 164 in the sub-urban zone respectively. Issues addressed in the questionnaire included socioeconomic characteristics of the respondents and their absorbability and adaptability coping capacity to the impact of flood disaster in the study area. Data collected from the field survey in 2025 were analyzed using both descriptive and inferential statistical methods such as cross tabulation, Analysis of Variation [ANOVA] and Chi-square.

Results and discussion

This section discusses findings on the socioeconomic characteristics of the respondents by employing variables such as age, gender, educational attainment and household size in the three developmental zones of Ile-Ife, Nigeria. Findings were also made on the absorbability and adaptability coping capacity of respondents to the impact of flood disaster. Variables employed in assessing absorbability and adaptability coping capacity to flood disaster involved respondents' local knowledge of early warning and access to personal financial resources among others. The parameters, number of respondents and the frequency of findings were arranged in Table 1- 3.

Socioeconomic Characteristics of Respondents

On the socioeconomic characteristics of respondents, variables examined were on the gender, age, educational attainment, average monthly income,

household size and the years spend in the study area by households' heads. These variables are important elements in examining opinion about environmental issues and also to evaluate the respondents' opinion on their absorbability and adaptability coping capacity to the impact of flood disaster (Odunsi et al., 2023; Mobolaji et al., 2025). Therefore, as presented in Table 1, findings were made on the socioeconomic characteristics of respondents in the study area.

Across the study area, findings revealed that 58.4% of the respondents constituted male gender while 41.6% accounted for their female counterpart. In the core zone, it was revealed that 59.6% which formed the majority accounted for male and it was the same in transition zone with 60.1% of the respondents that were also accounted for male gender. Also, similarity exist in the suburban zone with 55.4% of the respondents that accounted for male whereas 44.4% of the respondents were female. Further findings indicated that 40.4% and 39.9% of the respondents were female in the core and transition zones respectively. This implied that male respondents were more available during the survey and even more environmentally conscious that their female counterpart in the three zones. The findings also reflect in the Chi-square result ($\chi^2 = 2.189$, $p = 0.212$) that there was no significant association between gender and developmental zones.

Findings further indicated that majority (53.3%) of the respondents were between 40 to 59 years of age and similarity exist in the three zones. Unlike in the core where 28.9% of the respondents were above 60 years, fewer respondents 14.1% and 17.6% constituted 20 to 39 years of age in the transition and suburban zones respectively. Impliedly, adult who are in the age bracket of 40 to 59 years formed majority of the respondents. This suggest that adult who are agile were in the study area and their availability could enhance absorbability and adaptability coping capacity to flood disaster. The findings are supported by Analysis of Variance result ($F=2.691$, $P = 0.105$) which revealed that significant variation is perceived in the age distribution of the respondents. Age of the respondents therefore is a determinant of coping capacity to the impact of flood disaster.

Information on the educational attainment of respondents revealed that majority (56.9%) had secondary education while 47.2% of the respondents attained tertiary education level in the study area. Further findings indicated that secondary education which was common in the core and transition zones accounted for 66.8% and 72.2% respectively unlike in the suburban where majority (67.6%) attained tertiary educational level. This is a clear indication that there is varying degrees of education attainment in the three zones. However, the findings are further confirmed by the Chi-square test ($\chi^2 = 2.112$, $p = 0.221$), which indicated that there was no significant association between respondents' education and developmental zones. Education of the respondents may likely enhance capacity to absorb and adapt to the impact of flood disaster. Meanwhile, income distribution which was to determine respondents' coping capacity to the impact of flood disaster was similar across the three zones.

Furthermore, findings revealed that 24.7% of the respondents have stayed not less than 15 years while 35.4% of the respondents have spent above 35 years in their zone. In the core zone, 48.7% of the respondents have stayed over 30 years unlike 54.8% in the suburban that have stayed between 15 to 30 years. Likewise, fewer (8.1%) of the respondents have stayed above 30 years in the suburban zone. This implied that years spent in an area could enhances households' coping capacity to the impacts of flood disaster. Furthermore, one third (38.1%) of the respondents had between 6 to 10 household size and this is common across the study area. Although, in the suburban zone, majority 51.2% had between 1 to 5 household size unlike 42.6% and 46.7% with household size of above 10 in the core and transition zones respectively. On the type of house occupied by respondents, findings revealed that 29.4% of the respondents resides in detached bungalow while 25.9% occupied semi-detached bungalow. Except the 42.8% in the suburban zone that reside in duplex, fewer 16.1% and 14.9% occupied duplex in the core and transition respectively. This indicated that detached bungalow building which is easily susceptible to flood disaster is common in the study area.

Based on the foregoing, findings revealed that there is varying degrees of respondents' socioeconomic characteristics in the three zones. As a result, socioeconomic characteristics of the respondents could be a determinant to absorbability and adaptability coping capacity to flood disaster in the study area.

Table 1 – Socioeconomics Characteristics of Respondents

Parameters	Developmental Zones			Total
	Core	Transition	Sub-Urban	
Gender				
Male	108 (59.6)	89 (60.1)	91 (55.4)	288 (58.4)
Female	73 (40.4)	59 (39.9)	73 (44.6)	205 (41.6)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Age				
≤ 20	2 (1.1)	8 (5.4)	11 (6.7)	21 (4.2)
20 – 39	36 (19.8)	21 (14.1)	29 (17.6)	86 (17.4)
40 – 59	91 (50.2)	87 (58.7)	85 (51.8)	263 (53.3)
60 – Above	52 (28.9)	32 (21.8)	39 (23.9)	123 (25.1)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Educational Attainment				
Primary	18 (9.9)	2 (1.5)	-	20 (4.1)
Secondary	121 (66.8)	107 (72.2)	53 (32.4)	281 (56.9)
Tertiary	42 (23.3)	39 (26.3)	111 (67.6)	192 (47.2)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Average Monthly Income				
≤ #30,000	88 (48.6)	51 (34.4)	14 (8.5)	153 (31.0)
≤ #60,000	68 (37.5)	69 (46.5)	49 (29.8)	186 (37.7)
≥ #61,000	25 (13.9)	48 (19.1)	101 (61.7)	174 (31.3)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Number of Years Spent				
≤ 15 years	37 (20.4)	24 (16.2)	61 (37.1)	122 (24.7)
15 – 30 years	56 (30.9)	51 (34.4)	90 (54.8)	197 (39.9)
≥ 30 years	88 (48.7)	73 (49.4)	13 (8.1)	174 (35.4)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Household Size				
1 – 5	42 (23.2)	20 (13.5)	84 (51.2)	146 (29.6)
6 – 10	62 (34.2)	59 (39.8)	67 (40.7)	188 (38.1)
Above 10	77 (42.6)	69 (46.7)	13 (8.1)	159 (32.3)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Type of House Occupied				
Detached Bungalow	52 (28.7)	50 (33.7)	43 (26.2)	145 (29.4)
Semi-Detached Bungalow	61 (33.7)	36 (24.3)	31 (18.9)	128 (25.9)
Story Building	39 (21.5)	40 (27.1)	20 (12.1)	99 (20.1)

Continuation of the table

Parameters	Developmental Zones			Total
	Core	Transition	Sub-Urban	
Duplex	29 (16.1)	22 (14.9)	70 (42.8)	121 (24.6)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Note – compiled by the authors				

Households' absorbability coping capacity to the impact of flood disaster

Findings were made on the households' absorbability coping capacity to the impact of flood disaster in the three developmental zones of Ile-Ife, Nigeria. Variables employed by households to absorb the impact of flood disaster involved households having local knowledge of early warning of disaster and access to personal financial resources. As indicated by Odunsi (2020) foreknowledge of a disaster allows for those concerned to adequately plan and reduce their vulnerability to disaster. Consequently, as presented in Table 2, findings were made on the respondents' absorbability capacity to the impact of flood disaster in the study area.

Findings were made on the availability of infrastructure that can withstand flood disaster in the study area. It was discovered that majority (56.2%) of the respondents does not have infrastructure that can withstand the impact of flood disaster in their homes while about one third (43.8%) of the respondents had availability of infrastructure across the three zones. Also, less than half of the respondents opined that there is availability of infrastructure that can withstand flood in the study area. As a result, households' absorbability to flood disaster through infrastructure that can withstand the impact of flood disasters was low in the three zones. This is confirmed by the Chi-square test result ($\chi^2 = 2.213$, $p = 0.181$), which indicated that there was no significant association between infrastructure that can withstand the impact of flood disaster and developmental zones.

Evidences in the study area indicated that households absorb the impact of flood disaster through infrastructure such as building, drain and green spaces that could withstand flooding. Thus, findings revealed that 44.6% of the respondents declared building as the predominant infrastructure that can withstand flood disaster across the study area. In the same vein, 30.6% which formed one third of the respondents indicated that drain can withstand flood disaster. Furthermore, just fewer 24.8% of the respondents believed that green spaces is the only infrastructure that can withstand the impact of flood disaster. Therefore, based on the findings, it is a clear indication that slightly about one third (44.6%) of the respondents indicated that infrastructure particularly building could withstand the impact of flood disaster, even though, it was common in the transition and suburban zones.

In order to examine households' absorbability to the impact of flood disaster, local knowledge of flood disaster was examined in the study area. Findings revealed that 39.7% of the respondents had local knowledge of early warning to flood disaster and this were more prominent in the core and transition zones. Except in the suburban zone where 55.4% of the respondents had the knowledge just at a time, majority (52.4% and 50.6%) had local knowledge early warning in the core and transition zones respectively. This imply that core and transition zones were more susceptible to flood disaster than suburban zone. As a result, absorbability coping capacity through local knowledge of flood disaster were early and there is downward decrease from the suburban to core zone.

Lastly, 52.9% that formed half of the respondents had access to personal finance as a coping capacity to absorb the impact of flood disaster. Likewise, majority (72.5%) of the respondents in the suburban zone declared accessibility to personal finance whereas fewer (54.7% and 59.5%) of the respondents in the core and transition zones respectively declared not availability to personal finance. As a result, disparity on the accessibility to personal finance exist in the three zones.

Table 2 – Households' absorbability coping capacity to the impact of flood disaster

Parameters	Developmental Zones			Total
	Core	Transition	Sub-Urban	
Availability of Infrastructure that can withstand flood				
Yes	71 (39.2)	67 (45.2)	78 (47.5)	216 (43.8)
No	110 (60.8)	81 (54.8)	86 (52.5)	273 (56.2)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Infrastructure that can withstand flood				
Drain	70 (38.6)	30 (20.2)	51 (31.0)	151 (30.6)
Building	54 (29.8)	77 (52.0)	89 (54.2)	220 (44.6)
Green Spaces	57 (31.6)	41 (27.8)	24 (14.6)	122 (24.8)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Local Knowledge of Early Warning				
Very early	42 (23.2)	43 (29.0)	18 (10.9)	103 (20.8)
Early	95 (52.4)	75 (50.6)	26 (15.8)	196 (39.7)
Just in time	10 (5.5)	13 (8.7)	91 (55.4)	114 (23.1)
Late	18 (9.8)	14 (9.4)	19 (11.5)	51 (10.3)
Very late	16 (9.1)	3 (2.3)	10 (6.4)	29 (6.1)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Access to personal financial resources				
Yes	82 (45.3)	60 (40.5)	119 (72.5)	261 (52.9)
No	99 (54.7)	88 (59.5)	45 (27.5)	232 (47.1)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Note – compiled by the authors				

Households' adaptability coping capacity to the impact of flood disaster

Households' adaptability coping capacity to the impact of flood disaster were examined in the three developmental zones of the study area. To adapt to the impact of flood disaster, households were examined whether they live in an affected house before renovation, change of social and environmental behaviour, access to financial resources to mitigate flood impact and institutional emergency relief materials. This is because households must be able to adapt to the impact of disaster and also continue in their daily activities (Odunsi et al., 2020; Ogundipe, 2024). Therefore, as presented in Table 3, findings were made on the respondents' adaptability coping capacity to the impact of flood disaster in the three developmental zones of Ile-Ife, Nigeria.

Findings revealed that 59.1% of the respondents resides in the affected house before renovation as adaptability coping capacity to the impact of flood disaster. In the core zone, majority (67.4%) of the respondents reside in the affected house before renovation unlike half (52.5%) of the respondents in suburban zone that does not reside in the affected house before renovation. Also, majority (59.1%) of the respondents reside in the affected house before renovation and this is more common in the core and transition zones. Further findings indicated that 52.5% of the respondents in the suburban zones does not reside in the affected house before renovation and this reflects in their income. Therefore, it could be concluded that respondents adapted to the impact of flood disaster by staying in the affected house before renovation

whereas it is a common activity in the core and transition zones.

Furthermore, in the three developmental zones, 37.1% of the respondents claimed to adapt early to the impact of flood disaster by changing social and environmental behaviour in their home. One third, 20% of the respondents also change their social and environmental behaviour very late and the findings were similar in the three zones. Further findings revealed that the period of change of social and environmental behaviour decreases from the core to the transition through suburban zone. Majority (37.1%) which formed one third of the respondents change early to social and environmental behaviour which could enhance households' adaptability to flood disaster in the study area. This suggest that there is low level of adaptation to flood disaster based on the period that respondents adapt to the impact of flood disaster.

To examine the capacity of the respondents to adapt to the impact of flood disaster, findings further indicated that slightly half (52.8%) of the respondents do not have access to financial resources. Although, findings revealed that 44.1% and 40.5% of the respondents in the core and transition zones had access to financial resources respectively, majority (56.7%) in the suburban zone do not have access to financial resources that could help to adapt to the impact of flood disaster. In all, variation exist in the respondents' accessibility to financial resources as a coping capacity to adapt to flood disaster in the study area.

Finally, in a bid to adapt to the impact of flood disaster, 40.7% of the respondents depends on the government for institutional emergency relief materials across the study area. Likewise, 20.9% of the respondents had their relief materials from non-governmental organizations in order to adapt to the impact of flood disaster. Though, 19.4% and 11.1% of the respondents depends on relatives and friends respectively for relief material, fewer 7.9% depends on church and mosque. As a result, institutional emergency relief materials which could help respondents to adapt to the impact of flood disaster were mostly through government. As a result, government intervention through the provision of institutional emergency relief materials promotes households' adaptability coping capacity to flood disaster in the study area.

Table 3 – Households' adaptability coping capacity to the impact of flood disaster

Parameters	Residential Zones			Total
	Core	Transition	Sub-Urban	
Live in affected house before renovation				
Yes	122 (67.4)	91 (61.4)	78 (47.5)	291 (59.1)
No	59 (32.6)	57 (38.6)	86 (52.5)	202 (40.9)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**
Change of social and environmental behaviour				
Very early	18 (9.9)	14 (9.4)	20 (12.1)	52 (10.5)
Early	81 (44.7)	50 (33.7)	52 (31.7)	183 (37.1)
Just in time	19 (10.4)	21 (14.1)	22 (13.4)	62 (12.5)
Late	22 (12.1)	32 (21.6)	40 (24.3)	94 (19.1)
Very late	41 (22.9)	31 (21.2)	30 (18.5)	102 (20.8)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493(100)**
Financial resources to mitigate flood impact				
Yes	80 (44.1)	60 (40.5)	93 (56.7)	233 (47.2)
No	101 (55.9)	88 (59.5)	71 (43.3)	260 (52.8)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493 (100)**

Continuation of the table

Parameters	Residential Zones			Total
	Core	Transition	Sub-Urban	
Institutional Emergency Relief Materials				
Relatives	35 (19.3)	10 (6.7)	51 (31.1)	96 (19.4)
Friends/Colleagues	21 (11.6)	20 (13.5)	14 (8.5)	55 (11.1)
Church/Mosque	10 (5.5)	14 (9.4)	15 (9.1)	39 (7.9)
Government	65 (35.9)	71 (47.9)	65 (39.6)	201 (40.7)
NGOs	50 (27.7)	33 (22.5)	19 (11.7)	102 (20.9)
Total	**181 (100)**	**148 (100)**	**164 (100)**	**493(100)**
Note – compiled by the authors				

Conclusion

Based on the findings from the study, it can be concluded that absorbability and adaptability coping capacity to flood disaster was with varying degrees in the three developmental zones and this was influenced by socioeconomic characteristics of households' heads. The study recommended that there is a need for government to formulate policies that could mitigate flood disaster. These policies and framework will aid flood disaster management agencies in carrying out pre-disaster management activities such as the identification of flood prone areas and early issuance of warnings to those residing in such areas.

Considering the peculiar situation of most households in the study area, in that they have no one readily available to help in times of distress. As such, they must fend for themselves in dire situations. This gives importance to having high availability rates of credit facilities and insurance especially in the core zone with low-income residents. The government is in the best position to provide this, as it will ensure that they are obtainable at a reduced cost as opposed to when done by private individuals/corporations.

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Conflict of Interest
The authors declare no conflict of interest.

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FROM UNIVERSITY TO WORKFORCE: CHALLENGES AND EXPERIENCES OF STUDENTS WITH DISABILITIES IN KAZAKHSTAN

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Abstract.
Purpose. This study explores the experiences of students with disabilities in Kazakhstan in relation to their academic processes and social inclusion within universities and workplaces. It aims to examine the challenges and opportunities these students face in academic participation, social life, and job placement.
Design/methodology/approach. The research focuses on students and graduates with disabilities and is based on six in-depth interviews. A qualitative approach was adopted to capture their lived experiences and perspectives on inclusive education and transition to employment in Kazakhstan.
Findings. The findings indicate that academic support is the most commonly provided service for students with disabilities, while social inclusion initiatives and career transition programs remain limited. Major challenges include restricted physical access to infrastructure, insufficient specialized assistance, and significant barriers to employment after graduation. Career preparation services were found to offer only superficial guidance, without providing clear direction for navigating diverse workplaces.
Originality. This study contributes to the understanding of inclusive education in Kazakhstan by highlighting the gap between academic support and social or professional inclusion for students with disabilities. It provides new insights into how universities and employers can enhance accessibility, inclusivity, and post-graduation support systems.
Keywords: inclusive education: disability, University, students' perceptions, social participation, challenges.

Introduction

Inclusive education is known to have received wide attention around the world because it is considered one of the key provisions in offering equal opportunities for disabled students. This approach is believed to increase participation and diversity in high schools and is aimed at reducing the barriers for students with disabilities by providing the necessary provisions, which would further benefit the arbitrary learners. The effectiveness of inclusive education could not be more timely in Kazakhstan, as it has recently become evident that the current education system of Kazakhstan could still not be prepared to address the needs of all learners and especially learners with disabilities.

Principles of non-discrimination in the field of education were accepted and supported by many states together with international law. The Republic of Kazakhstan, after gaining its independence, adopted its laws starting from the Constitution of Kazakhstan 1995, and the Labor Code in 1999. All these laws incorporated the main provisions of the Universal Declaration of Human Rights, specifically the right to education, Article 26, and Article 30 of the Constitution of Kazakhstan, also guaranteeing the right to education. Those are the fundamentals of Inclusivity.

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In Kazakhstan, the educational system is now facing some problems with students with disabilities. This paper argues that students with disabilities have not fully been able to exercise full participation in universities through educational activities because they are still being restricted by physical, social and academic challenges.

Another domain that involves many such difficulties is a lack of career guidance matching the individual needs of students of universities such as SDU University, Al-Farabi Kazakh National University.

Therefore, this article gives the experiences of students with disabilities in universities of Kazakhstan, with regard to their academic process and social inclusion. This article makes use of interviews with students and attempts to present a general idea concerning the current status of inclusive education and the barriers that these students face. This article identifies grey areas of support mechanisms and gaps in services that may affect successful integration into higher education.

The results of this article seem to be relevant to extend the knowledge of the community about the challenges of students with disabilities, and also to define further development tendencies at SDU University and other institutions.

Although the objectives are expressed in the integration of the students in academic and recreational activities, the achievement of these goals requires constant and perpetual process of making changes, creating a barrier-free environment for students with disability, and yet making them feel welcome to the environment.

This article discusses the students' experiences with disabilities as a contribution to the broader discussion of necessary changes in higher education and the workplace that will support students with disabilities in making a successful transition to professional life. The sections describe the existing state of inclusive education in Kazakhstan based on the learners' accounts at universities in Kazakhstan, as well as the policy recommendations and further practice of inclusive education.

This article tries to address the given areas and contributes to the growing discussion on the provision of inclusive education and career transition support for students with disabilities in Kazakhstan.

Literature review

Inclusive education has always had an importance in facilitating equity and access for all learners and children with disabilities. However, the actual implementation of inclusive education differs from country to country; Kazakhstan is not an exception here. Other studies have described key policies formulated by the Kazakhstan government to enhance inclusion but the realities faced by disabled students on the ground are harsh. For instance, Sazykova et al. (2019) found out that students with disability problems in Kazakhstan struggle to attend higher education academic and social experiences.

These challenges include; physical barriers such as accommodation structures that are categorized as inaccessible throughout the campus, social barriers in terms of lack of services offered to students with disabilities, and the social exclusion of the latter among other students.

In this line, Bolat (2021) continues the argument that while state programs exist to promote employment of persons with disabilities, they are poorly developed in Kazakhstan. In this regard, focused career guidance or other measures that can help a student with a disability to make a shift to the labor market after completing university are not offered to most people with such needs. The absence of such specific assistance means that many students encounter significant challenges in the rather stiff job market and therefore cannot find appropriate and flexible employment. This switch is considered to be of real significance internationally. Lacking effective transition programs, learners with disabilities end up experiencing feelings of frustration and despair once they are discriminated against in the labor market and generally have problems with barriers that are still not addressed when getting jobs.

Another study conducted by Houghton and Sutherland (2020) recommends that they also indicate that work skills which include incorporation of work-integrated learning, internships, mentoring, and customized career services into transition programs improve the employment prospects of students with a disability. This is regarding the fact that all students whether normal or with learning or physical disabilities should receive their education through regular schools and universities. Notwithstanding this, the process of implementing this practice in inclusive education has met a lot of challenges.

Limited and unavailable instruction, technology and physical campus are severe forms of resource challenges in accessing students with disabilities in higher education. Similarly, few classrooms, library or other similar facilities are accessible for students with mobility impaired mainly because, there has been no arrangements made to accommodate students with such physical disability. However, this is

compounded by social exclusion of disability related issues which continue to isolate these students further from the university fraternity. However, Barker (2016) notes that the time at which students with disabilities may drop out of education and seek employment is a difficult phase in a disabled student's life as pointed out by Bolat in 2021.

There are programs at the state level that are designed to assist people with disabilities find jobs, most of these programs provide few services to ensure that students with disabilities transition into the workforce ready for employment. However, Bolat is right in saying that career counselling and employment placement services should be very much specific, holding the concern of student disabilities in mind to enhance the opportunity to successfully connect education and employment.

According to Orynbassarov, D., Maulen, A., & Rollan, K. (2025) the absence of clear pathways to employment reflects the limited availability of vocational training, the absence of structured career guidance programs, and insufficient engagement from employers. These interrelated gaps significantly constrain the capacity of students with special educational needs and disabilities (SEND) to transition successfully into meaningful and sustainable employment.

Inclusive education therefore holds the belief that every learner needs and has the right for access to quality education irrespective of the physical, intellectual, social, emotional, or communication impairment the child may have (Ainscow, 2005). This approach focuses on how best to minimize obstacles that limit equality during learning. The Salamanca Statement of UNESCO (1994) defined that inclusive education is concerned with endeavoring to make education systems more open and effective in responding to the needs of all learners by providing suitable curricula, buildings and strategies. According to writers like Florian and Black-Hawkins (2011), inclusion is not merely a process of putting children with disabilities in mainstream classrooms but rather it is the act of making the learning environment naturally inclusive.

Governing policies are considered to have relevance in the enhancement of effective delivery of inclusive education. In Mitchell's (2014) opinion, institutional policies also concern architectural barriers and/or supply of assistive technology as well as curriculum access, teacher education, and evaluation techniques. The argument that many universities in particular have egalitarian policies is feasible because most lack a consistent and monitored policy (Slee, 2011). Sharma et al.'s (2012) study notes that institutions must involve leadership and supportive policies to encourage the participation of all. However, these policies are still noble on the surface without resolving many of the issues related to social and cultural implications students with disability experience every learning day.

Even though there has been a great improvement, students with disability still encounter numerous challenges while pursuing their university education. These are classified into physical, academic, social, and attitudinal barriers (MacArthur et al., 2015). Restriction based on physical barriers consists of limited campuses and the appropriately needed transportation structures. School barriers stem from a lack of educational framework, organizational structure, and paraprofessional servicing. Special barriers are inseparable from the negative attitude toward people with disabilities in society with corresponding negative impacts such as stigmatization, social isolation, and lack of companionship (Norwich, 2008). That is why Forlin (2010) acknowledges that attitudinal barriers are even worse because negative perceptions from faculty members and other students make a person uncomfortable.

Thus, inclusive education is considered not only in terms of school achievements but also in terms of student's social and emotional adjustment. According to Carter et al. (2017), organizational support in peer friendships, mentors as well as counseling for the affected students is crucial based on students with disabilities' mental health issues. It is worth noting that social inclusion, according to Goodley (2016) remains underemphasized in the course of institutionalization even though it is a useful factor in the broad processes of student learning. Four of the most important mood states that may influence learners' academic achievement and enthusiasm are loneliness, low self-esteem, and persecution.

Another significant and valuable part explaining the outcomes of inclusive educational processes is the professors' perceptions and readiness levels. Lancaster and Bain (2007) point out that many instructors have inadequate training in inclusive classroom practices. It is therefore important for training programs that seek to increase awareness and practice of inclusive teaching to fill these gaps. According to Sniatecki et al. (2015), research also shows that faculty who were trained in such areas were more confident and competent when it came to disability–related student support. Further, one fac-

tor that is very crucial for learning and teaching for all includes the ability of the staff to provide sections, and special arrangements for the assessments such as making arrangements for a student to sit for the examinations at a date closer to the completion of such an assessment, to enable provision of specific arrangements to a particular student. The passage of students with disabilities from the education sector to the working environment is one of the hardest exercises. A study by Winn and Hay (2009) revealed that higher education no doubt delivers a poor service in preparing and offering career guidance and internships for students with disabilities. According to Juetal, internships play a favorable role that exposing students to an early work environment making them more useful to employers and more confident. Nevertheless, many students claim that career-related support and development are not well organized and are inadequately offered to prepare students for job markets.

This lack of service puts the graduates with disabilities in very poor standing for the employment job market hence a reason why such groups have high unemployment rates. This can be reinforced at the international level through research undertaken by Houghton and Sutherland (2020) in as much as they have underlined the need to adopt an ecological perspective to this change process and integrate internships, mentorship programs, and professional development initiatives targeted at disabled students. These programs not only provide students the chance to learn and experience the workplace but also boost the confidence and professional ability of the students. It also offers an opportunity for students to meet potential employers in mainstream environments and show they can perform the work required as well as combating the attitudes that may be held towards the disabled in the workforce. According to Garner and Hull (2021), universities have a responsibility to ensure students with disabilities get ready for the workplace because universities have the possibility of creating a climate of inclusion and support. As Garner and Hull (2021) proposed, universities provide enough academic support for students, in like manner, and to the same extent, they have to portray that social integration is not left behind, for these social networks and affiliations are part of how job openings happen. However, this full social participation of students, as was identified in a number of studies (e.g., Bolat, 2021; Houghton & Sutherland, 2020), may be hampered by not-so-inclusive policies of universities, which already influence their further careers.

Internationally, several practices have been recommended to increase inclusiveness in universities. Apart from this call for references there are examples, for instance, flexible assessment systems, there are mentorship programs, there are peer support programs, as described by European Agency for Special Needs and Inclusive Education (2018). In Canada, universities have a centralized accessibility service for students with disabilities which offers academic adjustment, personal counseling, and assistive technology (Stodden et al., 2003). Same with the UK scheme called Disabled Students' Allowance (DSA) which gives money to students so that they can acquire all the essential materials and services they need. Regarding these practices one realizes that the set environment supports the idea of the boy's complete fulfillment where both the academic and non-academic aspects are met. In Kazakhstan, there is increased awareness of inclusive education so there is still much that can be done. The government has stepped up the endeavors of adopting and implementing inclusive policies but still, it is found that the extent of implementation in higher education is rather limited (Zhetpisbayeva & Shelestova, 2015). A significant proportion of universities do not have barrier-free access, professional-staff support, and individualized approaches. Thirdly, cultural prejudices also hamper integration of the disabled persons in the society in question. According to Kozhabekova et al. (2020), some recommendations of the study may suggest systematic education reforms along with enhanced teacher training programs and the increased investment in accessibility infrastructure. With such findings, the paper attempts to investigate students' experience with disability at universities of Kazakhstan, in terms of their integration in academia, social inclusion, and integration towards employment. As a result, this paper aims to explain not only through the list of support service gaps but also through some recommendations for developing better inclusive educational practices through which such students with disabilities may have a smoother university-to-workforce transition.

Methodology

This paper explored the level of support provided to people with disabilities in Kazakhstani higher educational settings, to evaluate how this support meets their educational, social and professional requirements, as well as to identify key gaps and offer recommendations for improving the effectiveness of the assistance provided. By answering to the re-

search questions: What level of support is provided to students with disabilities at Kazakhstani universities, and to what extent does this support meet their needs?

The method adopted in this article was a qualitative approach. The mentioned approach was selected to gather detailed data from participants, allowing for the discussion format of the interviews. The principal purpose was to provide insights into participants' experiences in academic, social, and career fields, which contributed to the analysis of the student support services that the students were provided with during their studies. The interview was carried out with graduates and students of two major universities in Kazakhstan, namely Al-Farabi Kazakh National University and SDU University. Initially, it was difficult to get in touch with graduates because most of them did not respond to the authors emails. That's why we could reach only limited number of graduates. It involved participants with various types of disabilities, including motor impairments that require mobility aids, as well as cognitive disabilities. Half of the students sent their answers to the questions online by email. Interviews with the other half were conducted in a face-to-face format with the help of the audio recorder.

Data was collected from September to November,2024. An online survey was administered via google docs. The responses provided by participants overviewed a systematic text condensation analysis, employing a descriptive method for cross-case qualitative analysis. This method prioritizes understanding participants' obvious statements rather than investigating hidden meanings (Malterud, 2012). The authors obtained approval from the Research Ethics Committee of SDU University in June 2024.

The questions of the survey intended to address the primary areas affecting student's life in university: academic support from teachers and staff, social life and provision of assistance for future career transition. The interview was aimed to measure any limitations and obstacles students with special needs may encounter in academic support services. The proposals for the further advancement of those existing problems were collected as well with the purpose of increasing the inclusivity in higher educational settings.

The results were thematically analyzed to identify common patterns and trends in the responses of various students. Emerging topics have been grouped into three main categories as follows: 1) Academic support from teachers and staff. 2) Social life and assistance for a future career. 3) Career transition.

Results and discussion

Academic Support. The responses of the participants indicated the generally favorable experience with the scholarly support they received at universities. According to them, some teachers permitted the written presentations of oral tasks if students had mobility difficulties or extended deadlines for assignments to meet the students' special needs.

Despite some teacher support, the noticeable differences in accessing educational materials, such as books in libraries were mentioned, revealing the lack of equal availability for everyone. The participant with vision impairment referred to the absence of accessible fonts (Braille font, as an example) in reading resources. Moreover, the online materials did not feature assistive technologies, which enable people with visual disabilities to access the needed materials more independently. Other students with reduced mobility mentioned that the infrastructure of the university does not fully meet the needs of people with physical impairments, making it complicated to get around the campus. It includes the use of special bathroom facilities, the absence of ramps in some areas of the building, and the lack of special seats. It correlates with the challenges described by Sazykova et. al (2019) regarding the same access to the infrastructure and materials in educational institutions in order to ensure the full participation of people with disabilities in social settings.

One participant of this study referred to the obstacles in accessing supplementary materials and resources, despite the university having special systems offering additional help and support to those with disabilities. They mentioned the electronic devices offered as an additional help, which they did not find helpful in their educational journey.

Another individual pointed out the lack of inclusive design and assistive infrastructure in buildings distinct from the university itself, in which some academic courses such as Physical Education took place. This deficiency in accessibility in academic settings was recognized as a major obstacle to the full integration of students with disabilities, making it challenging for them to fully participate and reach support when needed.

Social Inclusion. Social inclusion and integration is the primary objective of the education of people with physical developmental disorders (Zholtayeva et al., 2013). Nevertheless, the study revealed the discrepancy in the interview reports of participants due to the different backgrounds and experiences. On one hand, many students had positive experiences: they

were able to participate in social life activities of their universities, develop friendships and make acquaintances, mostly due to the compassion and support displayed by their peers. Nonetheless, other participants also stated that their involvement in extraclassroom events and social life on campus was circumscribed. The United Nations' Convention for the Rights of Persons with Disabilities specify the rights of people with disability to culture life, recreation, leisure, sport, and tourism (Darcy, 2012). Some students pointed out the lack of special events adapted and designed for those with disabilities, which created difficulties in having a sense of belonging to the students community.

These findings correspond to the issue raised by Bolat (2021) that social integration systems and programs for students with disabilities are often poorly developed and unsatisfactory, which negatively impacts people's overall college experience. The students participating in this study voiced a strong wish for the conduction of various inclusive extracurricular activities within the universities that would enable them to engage with a broader range of people and feel as a full part of the society.

Transition to Employment. The shift from the university setting to career was found to be one of the most complicated factors for the participants surveyed in this study. Several students shared doubts and concerns regarding the lack of workforce assistance programs specifically designed to meet the special needs of learners with disabilities. While some individuals described receiving job counselling from the university support systems, they felt that the guidance offered did not sufficiently respond to the needs and special difficulties they might encounter in the workplace. For instance, interviewees with physical disabilities were preoccupied with whether future work settings would offer inclusive workspaces, while participants with cognitive disorders raised concerns about how their speech difficulties would affect their future career opportunities.

The shortage of internships, mentorships, and career guidance services that take into consideration the unique needs of students with disabilities was recognized as a significant gap in the support offered. This finding corresponds to the challenges posed by Houghton and Sutherland (2020), who argued that specialized job counsellings and internships are crucial for giving help to students with special needs to transition successfully into the employment market. Furthermore, the stigma that surrounds disability in the job places was also a major barrier described by the participants of this study, who were concerned that employers would not acknowledge their abilities and qualifications due to their conditions.

Recommendations for Enhancing the Inclusive Education State of Kazakhstan Universities.

Taking into account all of the findings mentioned above, a number of recommendations can be suggested to improve the academic and social life experience of students with special needs at SDU University, specifically about academic experience, social integration, and transition to career path. These recommendations are derived from the difficulties of participants found in the reports and relevant studies, which underlines the necessity for a holistic and more systematic approach to inclusive education and future career guidance.

Enhancing Academic Support. One of the foremost suggestions is to advance equal access to educational resources and university amenities. Despite SDU University providing some needed facilities, such as special digital materials in libraries, learners with disabilities also described the insufficiency of some resources and adaptations supplied. To tackle this issue, it is advised for the university to invest in more inclusive facilities, such as equipping the libraries with a larger number of educational resources with accessible formats (e.g., Braille, large prints, audio books, etc.). This improvement would enable the students with visual impairments to have a more equal access to academic materials.

Furthermore, the university should work on advancing the physical accessibility of some of the parts of the campus. Although SDU University provides inclusive accommodations in a campus building such as ramps and elevators, some students reported the inconsistent work of automatic doors and absence of ramps in some halls where only the stairs were available. Learners with physical impairments should have easy and quick access to all zones of the campus, including classrooms at different floors, libraries, cafeterias, and restrooms. This requires making facility adaptations, such as additional ramps, broader doorways, as well as equipping the classroom with suitable seating arrangements.

Some students also reported the challenges in crossing the road outside the university building due to the lack of crosswalk and elevator in the crossing bridge. For the above reasons, additional renovations to make the transportation outside the campus for students with special physical needs to enter the university area would also be convenient and beneficial.

It is also significant to enforce transparent and more efficient structures for accessing academic sup-

port. As some participants revealed, the process for accessing supplementary learning resources or accommodations might be perplexing and lacks organization. A well-organized system where students can seek assistance in both physical and digital formats, as well as track the status of their requests would enhance the quality of their experience.

Enhancing Social Inclusion. To enhance social inclusion, SDU University might offer extracurricular activities specifically for students with special needs with the purpose of spreading awareness and celebrating differences that would encourage their active engagement in social events and student clubs. Inclusive activities can foster interactions and communication between students with and without special needs, breaking down the barriers and giving the sense of belonging to those with disabilities.

Moreover, the creation of student clubs focused on rights of people with disabilities and inclusion can function as safe spaces where learners with special needs can share resources and collaborate to enhance the overall inclusivity of their universities. By promoting an inclusive campus culture, SDU University can build a safe environment that would help learners with unique needs feel valued and supported.

Supporting the Employment. Transition from college life to career remains one of the most challenging aspects. To enhance the preparation of these students for the job market, SDU University might consider extending its career counseling and professional development services to catering the special needs of learners with disabilities. This could incorporate providing individualized recommendations on resume crafting, future job interviews, as well as dispensing advice on how to tackle possible obstacles related to their condition in the workplace.

In a similar vein, the university might cooperate with local companies and corporations to create special internships and practicum prospects for learners with unique needs. These opportunities would offer students significant practical experience while giving them an opportunity to display their potential and competence in authentic settings. In turn, employees might profit from a more inclusive job environment, attaining different standpoints and insights from job holders with special needs.

Another beneficial feature would include pairing students with disabilities with specialists and professionals in their fields of discipline. The mentors could assist and offer special counselling to those students throughout the job hunting period, helping them boost self-confidence, broaden their career networks, and guide the corporate environment. In particular, these mentorship projects might consist of not only students with special needs but supervisors and specialists who are devoted to building inclusive and accessible work settings.

Conclusion

This article investigated the overall state of social life at universities in Kazakhstan for students with disabilities, such as progression and challenges. Based on the interviews, the common answers included obstacles students face in participating in social life activities, which leads to not being able to fully benefit from club and organizational life due to certain physical conditions.

Secondly, the research found that there was a significant gap in offered career services when graduating. Some students stated that the career preparation services navigated them on a superficial level without providing directions as to where to find information on how to manage diverse workplaces. As it was mentioned, they were often unable to address their needs, and the state of university's support structures was lacking.

The study revealed that these gaps must be overcome to achieve environmental equality for disabled people. Teachers are crucial in shaping the learning outcomes and success of students with special educational needs (SEN). Their guidance, dedication, and understanding have a profound effect on improving educational learnings and advocating an inclusive environment where every student matters. The findings of this paper indicated also challenges in teacher training, and societal attitudes. While these findings inform us about the need to strengthen teachers' support and training in inclusive education and transition, it is crucial to consider its limitations. First, the researches geographic focus on Almaty region limits the generalizability of its findings to other regions of Kazakhstan, where resources and cultural attitudes may vary. Additionally, a key limitation of this paper lies in the low representation of participants with disabilities in the focus group. The small amount of participants limits the depth and diversity of approaches that could have enriched the research. As a result, the findings may not fully capture the wide range of experiences, needs, and challenges faced by people with disabilities across different contexts. Future research should therefore aim to include a larger and more diverse sample to enhance the generalizability and inclusiveness of the results.

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- Study stages
- Research methods
- **Results and Discussion:** Analyze and discuss the research results. Draw conclusions from the results, comparing them with previous woks. Provide answers to the research questions.
- **Conclusion:** Summarize the work, confirm the truth of the assertions made, and conclude with the changes in scientific knowledge resulting from the research.

References

The reference list should be in alphabetical order and include only works cited in the text. Consider the following:

- Cite main scientific publications and advanced research methods relevant to the field.
- Avoid excessive self-citations.
- Include fundamental and relevant works by well-known local and foreign authors and researchers.
- References should be cited in the text using brackets, indicating the first author, year of publication, and page number (e.g., Smith, 2010).
- For multiple works by the same author in the same year, add "a," "b," etc., to the year of publication (e.g., Smith 2001a: 15, Smith 2001b: 22).

Style of References

- Russian and Kazakh References: Follow GOST 7.1-2003 "Bibliographic record. Bibliographic description. General requirements and compilation rules."
- English and Romanized References: Follow the American Psychological Association (APA) 7th style. For more information, visit https://apastyle.apa.org/

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