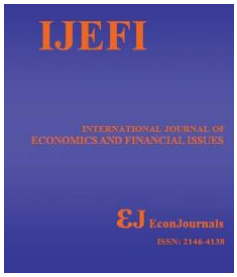

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Exploring the Impact of Big Data Analytics on FinTech Performance: The Mediating Role of Business Analytics Strategy in Jordanian Commercial Banks

Baaeth Aldalaien[1], Mohannad Al-Majali[1], Fawwaz Tawfiq Awamleh[2]*, Raed Walid Al-Smadi[1]

[1]Department of Finance, Amman Arab University, College of Business, Amman, Jordan, [2]Department of Business Administration, Amman Arab University, College of Business, Amman, Jordan. *Email: f.awamleh@aau.edu.jo

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ABSTRACT

This research examines the impact of big data analytics (BDA) on the performance of FinTech in Jordanian commercial banks using the BAS mediating effect perspective. The analysis seeks to explore how strategic application of data analytics contributes to banking, financial technology efficiency, and innovation. 415 usable questionnaires were obtained from the staff of technical and administrative departments of different Jordanian commercial banks. The data were analyzed using Smart PLS 4, a well-known structural equation modeling software. The results showed BDA to be a positive and significant driver of FinTech performance and definitively confirmed data analytics capabilities to be significant enablers of digital banking transformation. In addition, the study finds that BAS mediates the relationship between BDA-FinTech performances partially. The partial mediation is interpreted to mean that although BDA enhances performance on its own, its effect is more pronounced with the availability of a developed analytics strategy. The paper emphasizes the importance of aligning data activities with organizational strategy in order to realize optimum value. It provides actionable implications for bank managers, policymakers, and technology leaders who are looking to harness the potential of big data to create innovative customer-focused financial solutions. By centering on the BAS role, the research also calls on institutions to commit to investing in analytics governance and strategic planning as central pillars for FinTech growth. In summary, this study adds to the existing literature on digital innovation in banking, particularly in the context of emerging economies such as Jordan.

Keywords: Big Data Analytics, FinTech Performance, Business Analytics Strategy, Jordan, Commercial Banks, Jordan
JEL Classifications: C55, G21, O33

1. INTRODUCTION

The quick digitalization of the world's financial sector, fueled by the convergence of data analysis and AI, has brought new complexities to modern research (Alarabiat et al., 2025). Researchers now face challenges in the form of collective innovation, diversified regulation, and changing customer habits (Cao et al., 2021; Rehman et al., 2023). Although there has been research on big data analytics (BDA) conducted in the developed economies, there is still a lack of empirical studies that consider strategic aspects—specifically FinTech adoption—when determining developing economies (Aldalaien and Awamleh, 2025). Few studies have thoroughly investigated how FinTech performance varies when analytics strategies are infused into organizational systems (Almajali et al., 2025).

Especially Jordan and other developing economies fall short of that. There is evidence that BDA improves banking performance (Al-Dmour et al., 2023; Alshannag et al., 2025), and likewise, the usage of FinTech domestically is correlated with higher profitability as well as lower risk (Kayed et al., 2025; Abu Khalaf et al., 2025). These studies address data analytics and FinTech

as loosely related events without investigating the way business analytics strategy (BAS) directs the impact of BDA into concrete FinTech outcomes. This lack of thorough investigation leaves the question of whether and how strategic frameworks enhance the BDA–FinTech link in Jordan's unique institutional environment hanging (Altarawneh et al., 2025; Aldalaien and Awamleh, 2025).

The main aim of this study is to answer this gap by examining the impact of BDA on FinTech performance in Jordanian commercial banks with BAS as a mediating factor. Particularly, we examine the data of 415 employees in administrative and technical roles and utilize the Smart PLS 4 structural model. Empirically examining strategic analytics governance, this paper provides relevant knowledge on how to make emerging market banks leverage data capabilities with innovation goals in order to maximize digital financial services and long-term competitive standing.

2. LITERATURE REVIEW

2.1. Big Data Analytics (BDA)

Big Data Analytics (BDA) refers to the organizational ability to collect, store, process, and analyze large volumes of structured and unstructured data to create usable insights and drive decision-making (Al-Nuaimi et al., 2022; Al-Dmour et al., 2023). Financial institution BDA facilitates better customer profiling, fraud detection in real-time, risk analysis, and predictive modeling to aid strategic planning. The theoretical underpinning of BDA is based on Dynamic Capabilities Theory, positing that organizations need to constantly re-configure and re-align internal capability as the external environment changes (Sivarajah et al., 2023). Based on the above, Big Data Analytics Capabilities (BDAC) are viewed as an important dynamic capability that promotes innovation and responsiveness. Empirical evidence indicates that BDA plays an important role in value creation through improvement in operational efficiency, improvement in innovation outcome, and responsive reaction to change in the market (Fosso Wamba et al., 2024. Furthermore, evidence supports that the effect of BDA on performance frequently manifests through organizational innovation (Brewis et al., 2023) or alignment of data and tools (Al-Nuaimi et al., 2022). In the Jordanian banking industry, under the mounting drivers of competition and customers' requirements, BDA is becoming more seen as a driving strategic asset behind the digitalization of financial services, including FinTech's building (Alarabiat et al., 2025).

2.2. Business Analytics Strategy (BAS)

Business Analytics Strategy (BAS) is a systematic approach to embedding data analytics within an organization's strategic plan in order to enable decision-making through data and sustained creation of value (Aydiner et al., 2019; Chen and Lin, 2021). BAS includes strategic deployment of analytics, analytics governance practices, talent, and synchronization of business goals and analytics programs (Awamleh et al., 2025). The theoretical underpinning of BAS is based on the Resource-Based View (RBV) and Strategy Alignment Theory, asserting that competitive advantage is derived from the proper alignment of strategic goals with in-house capabilities and resources—i.e., data governance and analytics infrastructure (Meskaoui et al., 2022). In industries like banking, where data is pervasive and intricate, BAS is a key facilitator of the value realization of BDA investments. By filling the distance between technical possibilities and management targets, BAS allows the corporation to extract valuable information from data to an optimum degree, streamline processes, personalize customer services, and provide innovative financial options (Awamleh et al., 2025). Empirical investigations indicate that companies with robust analytics strategies have a high likelihood of outperforming companies with no strategy for integration (Barton and Court, 2022). Hence, BAS not only brings value to individuals in BDA but also serves a critical mediating function to determine how well individuals in BDA translate data insight into quantifiable business results (Shwawreh et al., 2025).

2.3. FinTech Performance

FinTech Performance can be defined as an indication of how effectively and how economically technology-based financial services are designed, distributed, and governed. It encompasses a wide range of innovations like mobile payments, electronic wallets, digital lending platforms, Blockchain-based services, and AI-powered customer support (Alshannag et al., 2025; Kayed et al., 2025). FinTech performance is generally measured by metrics that consist of customer satisfaction, innovation levels, personalization of the service, operational efficiency, and returns on investment. The disruption capability of FinTech in the banking sector is due to its ability to disrupt established business models, provide enhanced accessibility, lower the costs of transactions, and enhance the user experience. Although numerous studies have targeted the direct effects of digital transformation initiatives on FinTech achievements, fewer have investigated the effect of strategic intermediaries such as BAS on this relationship (Abu Khalaf et al., 2025). The adaptive characteristic of financial technology, as well as technical interfacing, also requires strategic control to address compatibility with regulatory, organizational, and market requirements. Therefore, with the knowledge of FinTech Performance via strategic analytics comes a better understanding of how banks are able to leverage technology to enable sustainable growth and digital excellence (Aldalaien and Awamleh, 2025).

2.4. Hypotheses Development

Big Data Analytics (BDA) helps organizations in unlocking enormous amounts of intricate data, enabling better decision-making and business responsiveness (Orero-Blat et al., 2025; Tetteh et al., 2025). For the banking industry and the overall finance industry, BDA enhances customer segmentation, risk assessment, fraud discovery, and service personalization (Ashok et al., 2022; Sivarajah et al., 2024). Firms that build robust capabilities in data analytics, as per Dynamic Capabilities Theory, perform well in improving responses to environmental change and continuously innovating (Wamba et al., 2017; Kumar et al., 2025). Empirical evidence indicates BDA's direct influence on FinTech applications in terms of innovation and competitive performance (Phillips, 2023; Petare et al., 2024). In particular, in developing economies such as Jordan, BDA becomes essential to revolutionize classical banking models into technology-based services, producing better FinTech results (Alshannag et al., 2025; Kayed et al., 2025). Therefore, it is argued that BDA positively affects FinTech performance by enabling banks to become more responsive to and

in tune with customers' and market trends' requirements. Which leads to the following hypothesis:

H_1: Big Data Analytics' positive effects on FinTech Performance.

Big Data Analytics capabilities create broad insights that need to be strategically managed with an effective Business Analytics Strategy (BAS) in an effort to induce long-term value creation (Schneckenberg et al., 2021; Fosso Wamba et al., 2024). Strength emanating from the Resource-Based View, BDA is a strength source that organizations need to incorporate in their strategy planning activities in an effort to induce competitive advantage (Sindarov et al., 2023; Meskaoui et al., 2022). Evidence suggests that organizations with enhanced BDA skills are likely to possess structured analytics strategies, such as governance, investment prioritization, and talent building (Chatterjee et al., 2023; Aydiner et al., 2019). Banks, particularly in emerging markets, have improved decision-making quality and stimulate innovation activities through data analytics strategic alignment (Abdurrahman, 2025; Salah et al., 2024). Hence, the hypothesis is that BDA and BAS have a direct positive relationship and the necessity to inject analytics into strategy frameworks. Which leads to the following hypothesis:

H_2: Big Data Analytics' positive effects on Business Analytics Strategy.

Business Analytics Strategy (BAS) plays a critical role in converting raw data intelligence into actionable business results, particularly in FinTech contexts where technological innovation is extremely dynamic (Tetteh et al., 2025; Wu et al., 2025). BAS incorporates strategic planning, data governance, cross-functional collaboration, and capacity development, all of which enable effective leverage of analytics to catalyze service excellence, customer satisfaction, and operational efficiency (Aydiner et al., 2019; Chen and Lin, 2021; Meskaoui et al., 2022). Research illustrates that companies with robust analytics plans outperform their rivals in digital innovation and market responsiveness (Kesse, 2024; Turi et al., 2023), and technology adoption to enhance performance metrics like product innovation and customer retention (Kayed et al., 2025). Consistent with this, it is thought that BAS enhances FinTech performance by aligning analytics efforts with business goals. Which leads to the following hypothesis:

H_3: Business Analytics Strategy's positive effects on FinTech Performance.

This hypothesis would posit that Big Data Analytics' impact on FinTech performance is significantly mediated through Business Analytics Strategy. Although BDA offers the technological underpinnings and potential of data-driven decision-making, these advantages are optimized when companies leverage strategic analytics governance and planning (Ashrafi and Zareravasan, 2022; Tetteh et al., 2025). If there is no formalized BAS, banks are likely to under-invest in BDA as data insights can remain trapped or become disconnected from organizational priorities (Wamba et al., 2017; Fosso Wamba et al., 2024). BAS is therefore an essential intermediary function that translates data ability into effective FinTech innovations, business operational excellence, and customer-focused services.

In Jordan's banking industry, where digital maturity is combined and competitive forces, there is a requirement for a robust BAS in achieving maximum BDA returns (Abdurrahman, 2025; Alshannag et al., 2025). Cross-functional alignment, sharing of resources, and compliance management through strategic analytics programs help banks utilize BDA to achieve long-term FinTech success (Mohammed et al., 2024; Salah et al., 2024). Theoretically, the mediation is by the Resource-Based View and Dynamic Capabilities Theory to imply that performance advantage is a result of the interface between data capabilities and strategic implementation (Kumar et al., 2025; Sindarov et al., 2023). Therefore, the study suggests that BAS substantially mediates the BDA-FinTech performance relationship, enhancing the effect of data analytics through the strategic alignment. Which leads to the following hypothesis:

H_4: Business Analytics Strategy mediates the relationship between Big Data Analytics and FinTech Performance.

3. METHODOLOGY

3.1. Design

This research applies a quantitative, cross-sectional approach to investigate the influence of Big Data Analytics (BDA) on FinTech performance in the Jordanian commercial banks with Business Analytics Strategy (BAS) as the mediating variable. The research is limited to the Jordanian commercial banking industry due to its key role in financial innovation and digitalization in the region. Jordanian banks have, across the years, adopted digital technologies and analytics tools to maximize operational effectiveness, customer service, and competitive edge. The banks thus offer an adequate setting to learn about the dynamics among BDA, BAS, and FinTech performance.

The pilot study was carried out before the process of actual data gathering in order to test the reliability and coherence of the measuring tools. The pilot sample consisted of 30 staff from two comparable-sized banks (outside the main sample) with attributes similar to those of the population under study. Pilot study responses were useful in clarifying wording ambiguity and construct measure validation. The pilot results showed strong internal reliability with Cronbach's alpha scores greater than the set threshold of 0.70 for all the dimensions, establishing the reliability of the tool (Nanclerio et al., 2022).

3.2. Population Sample

The target population consisted of staff employed in technical and administrative divisions of the 13 licensed commercial banks in Jordan, as reported by the Central Bank of Jordan. Some of these are the big banks, including Arab Bank, Bank al Etihad, Jordan Ahli Bank, and Cairo Amman Bank. The sampling frame was employee lists and official HR departments, with prior permission. Populations under study comprised professionals with direct or indirect experience in digital transformation, data analytics, IT systems, strategic planning, and FinTech implementation. Stratified random sampling was used to provide representative proportions from technical (e.g., IT, innovation, digital banking) and administrative (e.g., operations, customer services, risk management) units. Of a total distributed number of 470, responses

were received on 415 questionnaires, reflecting an excellent response rate of 88.3% (Lakens, 2022).

3.3. Measurement and Instrumental Methods

The measurement instrument for data collection was a standardized questionnaire that had been modified from previous, well-determined scales in earlier business analytics, FinTech, and strategic management studies. BDA scale was modified from Wamba et al. (2017) and Al-Dmour et al. (2023) and addressed factors like data acquisition, analytical capability, data-driven culture, and real-time processing. BAS scale was constructed with Aydiner et al. (2019) and Meskaoui et al. (2022) items demonstrating strategic alignment, governance, leadership support, and decision orientation. The FinTech performance scale was modified from Kayed et al. (2025) and Alshannag et al. (2025), highlighting innovation output, customer experience, digital transaction success, and process agility. All the constructs were measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), which allowed for similar data interpretation.

The process of data collection entailed electronic and hard copy distribution of the questionnaire. Bank administrators and departmental heads eased the information dissemination process. Voluntary response was prompted, and anonymity was guaranteed to obtain truthful responses. The respondents were provided with detailed instructions and a brief description of the purpose of the study. The process of data collection lasted for 6 weeks.

3.4. Data Analysis

To assess the data, Partial Least Squares Structural Equation Modeling (PLS-SEM) was utilized with Smart PLS 4.0. The rationale behind the usage of this approach is its ability to cope with complicated models containing many constructs and its suitability for exploratory and predictive research. Measurement model assessment was first employed to examine indicator reliability, internal consistency (with Cronbach's alpha and composite reliability), convergent validity (Average Variance Extracted), and discriminant validity (Fornell-Larcker criterion and HTMT). Then the structural model was tested for the relationships between BDA, BAS, and FinTech performance, for instance, the mediating effect of BAS using the procedure bootstrapping with 5,000 resamples. R^2 as well as effect sizes (f^2) were also tested to assess the explanatory power of the model. The findings showed robust empirical support for the relationships hypothesized as well as the mediating effect of BAS (Hair et al., 2025; Sarstedt et al., 2024).

4. RESULTS

Table 1 describes the demographic profile of the sample of 415 Jordanian commercial bank participants. The gender split of the participants indicates that the participants included 248 male participants (59.8%) and 167 female participants (40.2%), both genders covered. The age bracket was skewed towards the 30-39 years category (44.5%), followed closely by below 29 years (24.6%), though other categories like 40-49 years (17.7%) and above 50 years (8.6%) were present, meaning there was a wide professional maturity base. The education levels were characterized by individuals with at least a bachelor's degree (52.9%), with a majority, albeit large, holding a master's degree (33.7%), while 13.2% held other degrees. Respondents' working experience was relatively evenly distributed, with 38.6% having experience of 5-10 years, 34.3% having experience of 10-15 years, and 18.6% having more than 15 years of experience. This wide range of distribution increases the external validity and generalizability of the research results across numerous hierarchical and functional levels within the banking industry (Sarstedt et al., 2024).

Table 2 provides the descriptive statistics for the main constructs under investigation. Big Data Analytics (BDA) also posted the highest mean score of 4.21 (SD = 0.56), which meant respondents strongly agreed that their banks have sufficient data acquisition and analysis processes. Business Analytics Strategy (BAS) came close with a mean of 4.08 (SD = 0.63), inferring good organizational fit with data-driven decision-making. FinTech performance was also rated with a significant mean of 4.15 (SD = 0.59), indicating positive attitudes toward electronic service provision, innovation, and customer interaction. The minimum and maximum for all variables were between 1.0 and 5.0, which is the rationale for applying a five-point Likert scale as well as an indicator of responsiveness and variance of responses obtained (Sarstedt et al., 2024).

Table 3 indicates the validity and reliability of the constructs. All factor loadings were above 0.79, meaning high item representation of their corresponding constructs. For BDA, item loadings were 0.81 to 0.86, Cronbach's Alpha = 0.88, CR = 0.91, and AVE = 0.67, reflecting high internal consistency and convergent validity. BAS items were just as consistent, with loadings of 0.79 to 0.84, Cronbach's Alpha = 0.86, CR = 0.90, and AVE = 0.65. FinTech performance was also as consistent, with item loadings of 0.81-0.87, Cronbach's Alpha of 0.89, CR = 0.92, and AVE = 0.70.

Table 1: Demographic characteristics of the sample (n=415)

Variable	Category	Frequency (n)	Percentage
Gender	Male	248	59.8
	Female	167	40.2
Age	Under 29 years	102	24.6
	30-39 years	186	44.5
	40-49 years	74	17.7
	Over 50 years	36	8.6
Education level	Bachelor's Degree	220	52.9
	Master's Degree	140	33.7
	Other Qualifications	55	13.2
Experience	5-10 years	160	38.6
	10-15 years	142	34.3
	>15 years	77	18.6
Total		415	100

Table 2: Descriptive statistics of study variables

Construct	Mean	Standard Deviation	Minimum	Maximum
Big Data Analytics (BDA)	4.21	0.56	1.0	5.0
Business Analytics Strategy (BAS)	4.08	0.63	1.0	5.0
FinTech Performance	4.15	0.59	1.0	5.0

Table 3: Reliability and validity analysis of constructs

Construct	Item Code	Item Statement	Loading
BDA	BDA1	Data acquisition capability	0.83
	BDA2	Analytical processing power	0.86
	BDA3	Real-time analytics	0.81
	BDA4	Data integration culture	0.85
	BDA5	Decision support from BDA	0.82
Cronbach's Alpha=0.88, CR=0.91, AVE=0.67			
BAS	BAS1	Strategic alignment of analytics	0.80
	BAS2	Data governance structure	0.84
	BAS3	Executive support for analytics	0.79
	BAS4	Data-driven decision-making culture	0.83
Cronbach's Alpha=0.86, CR=0.90, AVE=0.65			
FinTech	FT1	Digital transaction success	0.85
	FT2	Customer satisfaction via FinTech	0.87
	FT3	Process agility	0.81
	FT4	FinTech innovation output	0.84
	FT5	Mobile banking effectiveness	0.86
Cronbach's Alpha=0.89, CR=0.92, AVE=0.70			

These ensure that all constructs possess a minimum of >0.70 for reliability and >0.50 for AVE, ensuring the instrument's stability for structural modeling (Hair et al., 2025).

Table 4 presents the discriminant validity according to the Fornell-Larcker criterion. All inter-construct correlations of between 0.58 and 0.66 are smaller than the square root of the AVE for each measure—BDA (0.82), BAS (0.81), and FinTech performance (0.84). This satisfies the Fornell-Larcker criterion, validating that all constructs are empirically different from each other. For example, the square root of AVE for every construct is higher than BAS and BDA's correlation of 0.61. In the same way, FinTech performance correlation with BAS (0.66) and BDA (0.58) is also lower than its square root of AVE of 0.84. All these outcomes present good discriminant validity evidence (Hair et al., 2025).

Figure 1 and Table 5 show the outcome of direct hypothesis testing for the structural model based on Smart PLS 4. The performance of FinTech was influenced significantly by BDA ($\beta = 0.38$, $t = 6.45$, $P = 0.023$), thereby proving Hypothesis 1 and establishing that efficient use of big data has a positive influence on FinTech performance. BDA-BAS relationship was stronger ($\beta = 0.62$, $t = 11.32$, $P = 0.000$), validating Hypothesis 2 and presenting the impact of infrastructure data on strategic alignment. The BAS to FinTech performance chain was significant as well ($\beta = 0.41$, $t = 7.02$, $P = 0.000$), validating Hypothesis 3 and indicating that sophisticated analytics strategies deliver better FinTech performance outcomes (Hair et al., 2025; Sarstedt et al., 2024).

Table 6 shows the mediating role of BAS in the relationship between BDA-FinTech performance. The direct effect of BDA on FinTech was still significant at 0.38, but the indirect effect through BAS was also significant at 0.26 ($t = 5.83$, $P = 0.000$), making the overall effect 0.64. These results validate Hypothesis 4 and, in addition, suggest partial mediation, insofar as although BDA affects FinTech performance directly, a very significant amount of its effect is mediated by strategic business analytics. This reinforces the necessity for data capability alignment with strategic intent to reap maximum digital innovation benefits (Hair et al., 2025).

Table 4: Discriminant validity (Fornell-Larcker Criterion)

Construct	BDA	BAS	FinTech
BDA	0.82		
BAS	0.61	0.81	
FinTech	0.58	0.66	0.84

Diagonal values (bold) represent the square root of AVE. Off-diagonal values represent inter-construct correlations. Values confirm discriminant validity

Table 5: Path analysis results for direct hypothesis testing

Path	Beta (β)	t-value	P-value	Result
BDA→FinTech	0.38	6.45	0.023	Supported
BDA→BAS	0.62	11.32	0.000	Supported
BAS→FinTech	0.41	7.02	0.000	Supported

Table 7 examines model fit. Standardized Root Mean Square Residual (SRMR) was 0.042, which was below the threshold value of 0.08, indicating good observed data-hypothesized model fit. Normed Fit Index (NFI) was 0.91, far greater than the threshold of 0.90 and again indicating model adequacy. The R^2 of FinTech performance and BAS were 0.65 and 0.62, respectively, and this means that 65% and 62% of the variance in these variables is accounted for by their respective predictors. All these results together confirm that the research model is statistically significant and practically effective for explaining the association between BDA, BAS, and FinTech performance (Hair et al., 2025; Sarstedt et al., 2024).

5. DISCUSSION

The result that Big Data Analytics (BDA) exerts a strong positive effect on FinTech performance ($\beta = 0.38$, $P < 0.05$) shows the increasing need for financial institutions to leverage data-driven capabilities. The outcome aligns with international studies that demonstrate the benefits of advanced analytics in enhancing customer personalization, fraud management, and operational effectiveness (Ashok et al., 2022; Orero-Blat et al., 2025). While it opens up fresh possibilities, it also highlights persistent challenges that are evident in practice: banks struggle with data integration and building comprehensive data ecosystems (Wamba et al., 2017; Tetteh et al., 2025). It identifies an important nuance—while the quantitative connection is made, its full fulfillment requires systems integration, regulatory harmonization, and human capital upskilling. Hence, the value contribution of this study is not merely creating the BDA–FinTech nexus but also determining readiness gaps that the FinTech units have to fill to translate raw data into strategic value.

The second hypothesis—the positive, powerful impact of BDA on Business Analytics Strategy (BAS) ($\beta = 0.62$, $P < 0.001$)—is based on the idea that capability comes before strategy (Fosso Wamba et al., 2024; Aydiner et al., 2019). It refers to the global trend towards seeding analytics infrastructures before an effective governance framework can take root. But there are even practical issues: research indicates that most organizations with high analytics investment remain strategically unoriented and managerially averse, resulting in under- or redundant analytics efforts (Chatterjee et al., 2023; Abdurrahman, 2025). This gap between deployable and deployed stresses the importance of the

Figure 1: Structural equation model for the impact of big data analytics on FinTech performance with the mediating role of business analytics strategy

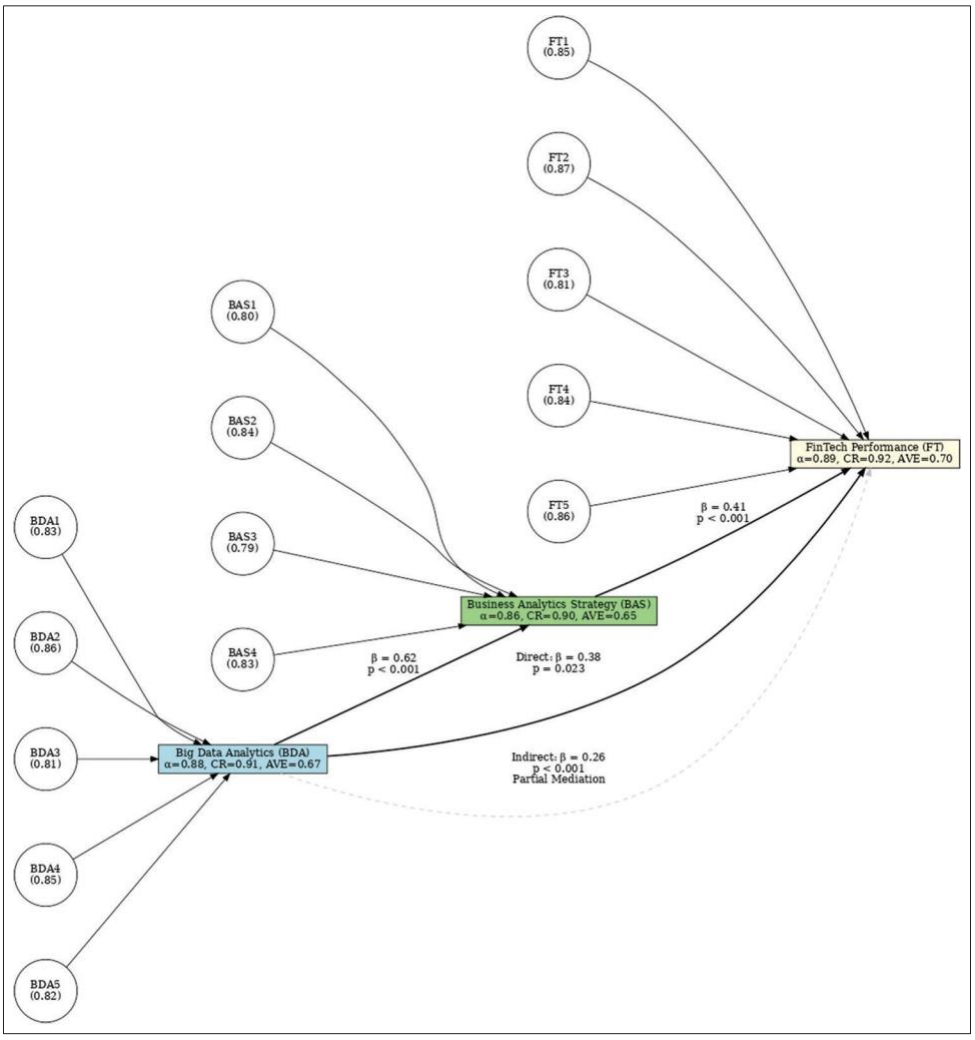

Table 6: Mediation analysis results

Path	Direct effect	Indirect effect	Total effect	t-value	P-value	Mediation type
BDA→BAS→FinTech	0.38	0.26	0.64	5.83	0.000	Partial Mediation

Table 7: Model fit indices

Fit index	Value	Threshold	Model fit
SRMR	0.042	<0.08	Good
NFI	0.91	>0.90	Good
R^2 (FinTech)	0.65	≥0.50	Strong
R^2 (BAS)	0.62	≥0.50	Strong

research: it not only confirms the technical-to-strategic process but highlights the necessity of executive management, cultural preparedness, and ongoing investment in order to guarantee a data strategy appropriately operationalized.

The third hypothesis—linking BAS with enhanced FinTech performance (β = 0.41, P < 0.001)—affirms that alignment of strategy is critical to converting data into significant outcomes (Turi et al., 2023; Kesse, 2024). Nevertheless, executing such strategies is difficult: organizations get mired in classic hierarchies, lose IT-business alignment, and near-term pressures on performance constrain strategic consistency (Meskaoui et al., 2022; Barton and Court, 2022). These concerns indicate that analytics strategy is not a template but an agenda for change in the organization that requires change management, governance models, and cultural fit. This result is profound: it indicates that investment in BAS is not discretionary but a required catalyst for returns on FinTech investment, in that it pays for itself through measurable value.

BAS's partial mediation effect on the BDA → FinTech performance route (direct effect = 0.38, indirect effect = 0.26, P < 0.001) validates theoretical models that presume resource capabilities need operationalization through strategic frameworks (Kumar et al., 2025; Sindarov et al., 2023). However, empirical findings have this route consistently fails in departments that are not institutionalized within an organization, lack mandate by the leadership, or have ambiguous measurement KPIs (Abdurrahman, 2025. This research provides concrete evidence that investing in analytics infrastructure alone, and not integrating it into a concrete

strategy, won't result in realizing maximum performance benefits. In proving that BAS helps improve the performance of BDA, our research provides actionable recommendations for banks: data to performance has to be paved with a purposeful strategy—a clear lesson for industries that are required to establish FinTech programs in complicated emerging economies (Awamleh et al., 2024; Aldalaien and Awamleh, 2025).

Conceptually, the present study adds value by combining the Dynamic Capabilities Theory and Resource-Based View to show that Big Data Analytics (BDA) capabilities need to be strategically aligned in order to enhance FinTech performance (Fosso Wamba et al., 2024; Sindarov et al., 2023). Existing studies agree that BDA per se cannot bring innovation and performance unless it is situated within a carefully designed strategic framework (Tetteh et al., 2025). Business analytics strategy (BAS) mediating role is aligned with the theory of strategic alignment as an essential mechanism that converts data capabilities into organizational performance (Wamba et al., 2017; Yoshikuni et al., 2023). In practice, these studies highlight that banks and financial institutions need to invest not just in data infrastructure but also in leadership support, governance, and analytics-based culture in order to maximize FinTech opportunities (Fosso Wamba et al., 2024; Wamba et al., 2017).

6. CONCLUSION

This research sought to examine the effect of Big Data Analytics (BDA) on the performance of FinTech in Jordanian banking companies, taking into account the mediating effect of Business Analytics Strategy (BAS). The findings established that BDA has a positive effect on FinTech performance, especially when integrated with an effectively worded analytics strategy. BAS served in a partial mediating capacity, highlighting the strategic fit involved in transforming data capabilities to digital performance. Theoretically, the research is contributory insofar as it is combining a blend of the Resource-Based View and Dynamic Capabilities Theory to describe how analytics assets are transformed into a competitive edge. Practically, the research provides insight to policymakers and bank managers on the importance of combining technology with strategic planning. Expenditure on data infrastructure in itself is not enough without alignment, governance, and decision support. Nonetheless, the research is constrained by its cross-sectional nature and single national context isolation. Follow-up studies would be best advised to apply the model to other industries and employ longitudinal designs so that change can be tracked over time. The inclusion of moderators like digital culture or regulatory environments could also be more insightful. In the end, this study reaffirms the mounting need for evidence-based strategy in its pursuit of FinTech leadership.

6.1. Limitations

Though the precious information has been disseminated, there are some limitations of this study. Firstly, the study used a cross-sectional design that limits inferring causality among Big Data Analytics, Business Analytics Strategy, and FinTech performance. Secondly, data were gathered from commercial banks in Jordan only, and as such, the findings may be inapplicable to other financial institutions, industries, or regions. Third, the information was derived from self-reports and hence might be prone to common method bias or social desirability bias. Lastly, the research only took into account three important constructs, without controlling for other possible intervening variables such as digital maturity, organizational culture, or even outside regulatory pressures.

6.2. Future Research

To advance this, future research must employ longitudinal study designs in order to observe the shifting impacts of BDA and BAS on FinTech performance within a time period. Broadening study coverage to more than one sector, like microfinance, Islamic banking, or FinTech startups across various nations, would increase the external validity of the model. Moreover, bringing in additional variables such as leadership style, digital disruption readiness, and regulatory environment can give more nuanced insights into the conditions under which BDA and BAS deliver the most value. Last but not least, bringing together quantitative with qualitative research—such as interviews or case studies—can give more in-depth insights into data-driven FinTech projects' strategic decision-making.

REFERENCES

Abdurrahman, A. (2025), Examining the impact of digital transformation on digital product innovation performance in banking industry through the integration of resource-based view and dynamic capabilities. Journal of Strategy and Innovation, 36(1), 200540.

Abu Khalaf, B., Al-Sharkas, A., Sarea, A. (2025), Realizing opportunities: The influence of FinTech on the success of MENA banks. Discover Sustainability, 6, 501.

Alarabiat, Y.A., Alayed, H.M., Awamleh, F.T. (2025), Green innovation strategies in achieving corporate sustainable performance through big data analytics. Planning, 20(2), 751-759.

Aldalaien, B.A., Awamleh, F.T. (2025), Integrating fintech into strategic management practices for achieving sustainable development goals. International Journal of Innovative Research and Scientific Studies, 8(3), 3446-3454.

Al-Dmour, H., Saad, N., Basheer Amin, E., Al-Dmour, R., Al-Dmour, A. (2023), The influence of the practices of big data analytics applications on bank performance: Field study. VINE Journal of Information and Knowledge Management Systems, 53(1), 119-141.

Almajali, W.I., Awamleh, F.T., Alarabiat, Y.A., Tawalbeh, M. (2025), Business intelligence systems and organization performance: The role of competitive advantage as a mediator variable. Economics - Innovative and Economics Research Journal, 13(2), 333-349.

Al-Nuaimi, S.R., Al-Ghamdi, S.G. (2022), Sustainable consumption and education for sustainability in higher education. Sustainability, 14(12), 7255.

Alshannag, F.M., Bani Hani, M.M., Eneizan, B., Arif, K., Rawash, H.N. (2025), The impact of financial technology (FinTech) on improving financial performance: The case of commercial banks in Jordan. International Journal of Advanced and Applied Sciences, 12(3), 28-37.

Altarawneh, A.S., AlAwamleh, H.K., Awamleh, F.T., Bustami, A.N. (2025), Big data backed business intelligence to upthrust commercial banks decision-making processes. International Review of Management and Marketing, 15(2), 180-188.

Ashok, M., Madan, R., Joha, A., Sivarajah, U. (2022), Ethical framework for artificial intelligence and digital technologies. International

Journal of Information Management, 62, 102433.
Ashrafi, A., Zareravasan, A. (2022), An ambidextrous approach on the business analytics–competitive advantage relationship: Exploring the moderating role of business analytics strategy. Technological Forecasting and Social Change, 179, 121665.
Awamleh, F.T., Albloush, A., Jarrah, M.A., Hasan, K.A. (2025), The role of data analytics and business intelligence in enhancing the relationship between e-HRM practices and job satisfaction. Problems and Perspectives in Management, 23(2), 208-219.
Awamleh, F.T., Bustami, A.N., Alarabiat, Y.A., Sultan, A. (2024), Data-driven decision-making under uncertainty: Investigating OLAP's mediating role to leverage business intelligence analytics for entrepreneurship. Journal of System and Management Sciences, 14(8), 350-365.
Aydiner, A.S., Tatoglu, E., Bayraktar, E., Zaim, S., Delen, D. (2019), Business analytics and firm performance: The mediating role of business process performance. Journal of Business Research, 96, 228-237.
Barton, D., Court, D. (2022), Making Advanced Analytics Work for You. Harvard Business Review. Available from: https://cebma.org/assets/uploads/barton-court-making-advanced-analytics-work-for-you-hbr-oct-2012.pdf
Brewis, C., Dibb, S., Meadows, M. (2023), Leveraging big data for strategic marketing: A dynamic capabilities model for incumbent firms. Technological Forecasting and Social Change, 190, 122402.
Cao, L., Yang, Q., Yu, P.S. (2021), Data science and AI in FinTech: An overview. International Journal of Data Science and Analytics, 12(2), 81-99.
Chatterjee, S., Chaudhuri, R., Gupta, S. (2023), Assessing the impact of big data analytics on decision-making processes, forecasting, and performance of a firm. Technological Forecasting and Social Change, 196, 122824.
Chen, Y., Lin, Z. (2021), Business intelligence capabilities and firm performance: A study in China. International Journal of Information Management, 57, 102232.
Fosso Wamba, S., Queiroz, M.M., Wu, L., Sivarajah, U. (2024), Big data analytics-enabled sensing capability and organizational outcomes: Assessing the mediating effects of business analytics culture. Annals of Operations Research, 333(2), 559-578.
Hair, J.F., Babin, B.J., Ringle, C.M., Sarstedt, M., Becker, J.M. (2025), Covariance-based structural equation modeling (CB-SEM): A SmartPLS 4 software tutorial. 1-16, https://doi.org/10.1057/s41270-025-00414-6
Kayed, S., Alta'any, M., Meqbel, R., Khatatbeh, I.N., Mahafzah, A. (2025), Bank FinTech and bank performance: Evidence from an emerging market. Journal of Financial Reporting and Accounting, 23(2), 518-535.
Kesse, M. (2024), Designing a digital interactive simulation for teaching business analytics, strategy, and economics. The Journal of Applied Business and Economics, 26(5), 122-138.
Kumar, S., Sharma, D., Rao, S., Lim, W.M., Mangla, S.K. (2025), Past, present, and future of sustainable finance: Insights from big data analytics through machine learning of scholarly research. Annals of Operations Research, 345(2), 1061-1104.
Lakens, D. (2022), Sample size justification. Collabra: Psychology, 8(1), 33267.
Meskaoui, Z., Elkharras, A., Peng, H. (2022), Assessing factors of behavioral intention to use Big Data Analytics (BDA) in banking and insurance sector: Proposition of an integrated model. International Journal of Accounting, Finance, Auditing, Management and Economics, 3(6-1), 226-246.
Mohammed, A.B., Al-Okaily, M., Qasim, D., Al-Majali, M.K. (2024), Towards an understanding of business intelligence and analytics usage: Evidence from the banking industry. International Journal of Information Management Data Insights, 4(1), 100215.
Nanclerio, F., Moody, J., Chapman, M. (2022), Applied periodisation: A methodological approach. Journal of Human Sport and Exercise, 8(2), 350-366.
Orero-Blat, M., Palacios-Marqués, D., Leal-Rodríguez, A.L., Ferraris, A. (2025), Beyond digital transformation: A multi-mixed methods study on big data analytics capabilities and innovation in enhancing organizational performance. Review of Managerial Science, 19(2), 649-685.
Petare, P.A., Bdair, M., Singh, M.N., Ateeq, K., Akila, R. (2024), Big data analytics in fintech: Revolutionizing risk management and decision-making. Acta Scientiae, 7(1), 605-617.
Phillips, F. (2023), OR, Systems, and MOT: A professional memoir. Technological Forecasting and Social Change, 188, 122298.
Rehman, S.U., Hassan, S., Rafay, M., Dad, A.M., Khan, S.N. (2023), Enhancing marketing strategy effectiveness in Fintech: The interplay of big data analysis, digital engagement, and market adaptability. Journal of Management Practices, Humanities and Social Sciences, 7(5), 48-59.
Sarstedt, M., Richter, N.F., Hauff, S., Ringle, C.M. (2024), Combined importance-performance map analysis (cIPMA) in partial least squares structural equation modeling (PLS–SEM): A SmartPLS 4 tutorial. Journal of Marketing Analytics, 12(1), 1-15.
Schneckenberg, D., Benitez, J., Klos, C., Velamuri, V.K., Spieth, P. (2021), Value creation and appropriation of software vendors: A digital innovation model for cloud computing. Information and Management, 58(4), 103463.
Shwawreh, S., Awamleh, F.T., Al Htibat, A., Altarawneh, A.S. (2025), The role of green business strategy in enhancing digital marketing strategy for sustainable business intelligence. International Review of Management and Marketing, 15(3), 18-25.
Sindarov, A., Vafaei-Zadeh, A., Syafrizal, S., Chanda, R.C. (2023), Big data analytical capability and firm performance: Moderating effect of analytics capability-business strategy alignment. International Journal of Applied Decision Sciences, 16(6), 663-685.
Sivarajah, U., Kumar, S., Kumar, V., Chatterjee, S., Li, J. (2024), A study on big data analytics and innovation: From technological and business cycle perspectives. Technological Forecasting and Social Change, 202, 123328.
Tetteh, F.K., Nyamekye, B., Attah, J., Gyamerah, K.K., Agboyi, M.R. (2025), Big data analytics capability and dimensions of business model innovation: The mediating role of strategic orientations under varying conditions of market dynamism. Journal of Enterprising Communities: People and Places in the Global Economy, 19, 728-764.
Turi, J.A., Khwaja, M.G., Tariq, F., Hameed, A. (2023), The role of big data analytics and organizational agility in improving organizational performance of business processing organizations. Business Process Management Journal, 29(7), 2081-2106.
Wamba, S.F., Gunasekaran, A., Akter, S., Ren, S.J.F., Dubey, R., Childe, S.J. (2017), Big data analytics and firm performance: Effects of dynamic capabilities. Journal of Business Research, 70, 356-365.
Wu, S., Li, C., Huang, F., Yu, Q. (2025), Exploration of the relationship between equity financing dependence, financing constraints, and corporate innovation performance. Finance Research Letters, 76, 107012.
Yoshikuni, A.C., Dwivedi, R., Zhou, D., Wamba, S.F. (2023), Big data and business analytics enabled innovation and dynamic capabilities in organizations: Developing and validating scale. International Journal of Information Management Data Insights, 3(2), 100206.