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The Impact of Strategic Orientations on Sustainable Performance: The Moderating Role of Business Intelligence at Jordanian Commercial Banks

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ABSTRACT Jordanian commercial banks are achieving sustainable performance by balancing economic, social, and environmental dimensions, aiming for long-term profitability, community development, and environmental awareness, which are crucial for the banking sector's continuity and development. The current study aims to investigate the impact of strategic orientations on sustainable performance and the moderating role of business intelligence at Jordanian commercial banks. This study collects the primary data from 218 managers at the top and middle levels of Jordanian commercial banks. This study utilized the Statistical Package for the Social Sciences (SPSS) to analyze hypotheses. The study revealed that strategic orientations (learning orientation, market orientation, digital orientation, and entrepreneurial orientation) had a statistically significant impact on sustainable performance at Jordanian commercial banks, with an explanatory power of (R^2= 44.4%). It was also demonstrated that business intelligence had a statistically significant impact on improving the impact of strategic orientations on sustainable performance at Jordanian commercial banks, with an explanatory power of (R^2= 45.3%). According to the results of the study, the most important recommendations for the banks surveyed are as follows: Jordanian commercial banks should adopt a sustainable strategy through their strategic orientations, focusing on social responsibility, environmental preservation, and environmental interest projects. They should utilize business intelligence, foster a sustainability culture, communicate with stakeholders, and continuously improve performance.

KEYWORDS: Business Intelligence, Strategic Orientations, Sustainable Performance, Digital Orientation, Jordanian Commercial Banks

1. INTRODUCTION

Jordanian commercial banks encounter challenges in a constantly changing business environment due to globalization, intense competition, and technological advancements, as well as handling customer preferences and needs. Therefore, organizations that fit with the concepts of sustainable development must modify their organization's performance measuring methodologies, which frequently involve value judgments and complicated structures with several business streams, roles, and operations (Keeble et al., 2003). Building sustainably entails using resources effectively in order to meet the needs of future generations as well as current ones, it is based on three pillars: environmental, economic, and social (Nair & Nayar, 2020).

Strategic management approaches demonstrated strategic orientation dimensions such as market orientation, entrepreneurial orientation, learning orientation, and technological orientation, all of which are vital for efficient operations (Azaj et al., 2020). Moreover, strategic management focuses on continually monitoring internal and external circumstances for rapid changes, particularly when confronted with rising

change, such as the global economic recession, which implies adaptability for survival (David, 2011, 8). In the same context, an organization's ability to sustainability depends on its ability to maintain distinctive competencies determined by its durability and inimitability; where durability refers to a firm's ability to depreciate or become obsolete, while inimitability refers to its irreplaceable unique skills (Wheelen et al., 2018, 140).

The concept of strategic orientation is frequently linked to organizational success or failure within business situations, which refers to organizational beliefs, traits, motives, and aspirations that lead to strategic analysis as well as growth (Wood, 1991; Wood & Robertson, 1997). According to Gatignon and Xuereb (1997) although the business's strategic orientation might lead to superior performance through market-driven concepts, its effect on creating innovative products is debatable.

Underpinning the resource-based view (RBV), empirical evidence indicates that an organization's strategic orientations predict superior performance due to their influence on the way organizations create and modify behaviors and capabilities. Market orientation and entrepreneurial orientation are being widely investigated as distinct or simultaneous competitive advantage factors (Kindermann et al., 2021).

Based on historical data, prior performance, and alternative scenarios, BI transforms data into meaningful information via individual analysis, enabling forecasting, hypothetical analysis, spontaneous data access, and strategic decision-making (Negash & Gray, 2004). Furthermore, according to the marketing approach literature, an organization's strategic orientation in the context of a market-driven organization has an important indication of its performance, involving their perception of its achievement of innovative products (Day, 1994; Cooper, 1994; Narver & Slater, 1990; Slater & Narver, 1994; Gatignon & Xuereb, 1997).

The rapid growth of new technologies has significantly impacted the business intelligence (BI) market, leading to significant technological and organizational innovations, promoting knowledge diffusion, and forming the foundation of business decision-making processes (ArnetzIiha, 2023). Business intelligence (BI) is an important tool for businesses that affects all activities and sectors. The use of BI effectively leads to enhanced business performance, but the key is in how firms use the data (Howson, 2013, 4).

Based on those arguments, this study attempts to fill a research gap by measuring the impact of strategic orientations on sustainable performance through business intelligence as a moderator variable at Jordanian commercial banks. This study utilized previous literature as a background for its variables, and it adopted the quantitative analytical approach to measuring the expected effect between the variables through the statistical program SPSS.

Previous studies regarding the impact of strategic orientations on sustainable performance at Jordanian commercial banks, with business intelligence as a moderator variable, show a research gap in linking these variables according to what the researcher found. The main research question is: **What is the impact of strategic orientations on sustainable performance through business intelligence as a moderator variable at Jordanian commercial banks?**

The study aligns with key literature and theories to support hypothesis development. Next, the methodology is illustrated, followed by data analysis. Then move toward the results and discussion, as well as the conclusions and recommendations.

2. THEORETICAL FRAMEWORK:

2.1. Strategic Orientations (SO)

2.1.1 Strategic orientations concept:

The notion of strategic orientation is becoming increasingly recognized throughout scholarship on marketing, entrepreneurship, and strategic management as a key concept affecting organizational performance and a crucial means of maintaining competitive advantage (Aloulou & Fayolle, 2005; Aloulou, 2019).

Three streams of research are concerned with investigating the link between performance and strategic

orientation: first, a typology of orientations developed by Milles and Snow; the second, the general approaches proposed by Porter of concentration, differentiation, and cost leadership; and the third, Venkatraman's (1989) investigation of strategic orientations as a setup of market, entrepreneurial, learning, and technological orientations, which examined the collective and synergistic consequences of these orientations on organizational performance (Azaj et al., 2020).

The concept of "strategic orientations" was initially introduced by Venkatraman (1989), who characterized it in terms of the following dimensions: "strategic aggressiveness, analysis, defensiveness, futurity, pro-activeness, and riskiness". In addition to, he proposed measuring an organization's strategic orientation by its organizational processes in these six categories, based on management perceptions and beliefs (Azaj et al., 2020).

According to Venkatraman (1989), strategic orientation is a broad pattern of the several ways that an organization's goals are achieved, including a focus on the organizational structure at the business unit level. Narver and Slater (1990) mentioned that strategic orientations represent the direction that an organization takes to construct actions for continually improved performance.

Furthermore, the term "strategic orientations" indicates management perspectives and attitudes regarding the way an organization handles the product-service market in a strategic manner in a number of aspects, including analysis, aggressiveness, defensiveness, and risks- taking (Venkatraman, 1989; Hakala, 2011; Huikkola & Kohtamäki, 2019). Obeidat (2016) explored that there is no single agreed-upon definition of strategic orientation. There is controversy regarding how to define orientation, and many streams of literature have generated a range of conceptual frameworks.

Strategic orientation represents the value that an organization places on particular activities while dealing with external factors in order to develop capabilities (Day, 1994; Helfat & Peteraf, 2015). Moreover, the strategic orientations of an organization determine its strategic management method, which is influenced by both external and internal environmental variables. It directs company behavior and provides broad frameworks for strategic decisions and orientations, influencing personnel within the firm to either positively or negatively affect its strategy (Slater et al., 2006; Uzoamaka et al., 2020).

Moreover, strategic orientation has been realized to be a crucial cultural feature in the research of the relationship among corporate culture and business performance in the field of strategic management (Weinzimmer et al., 2012). According to Noble et al. (2002), orientation refers to the adaptation of organizational culture that guides its relations with the environment.

Zhou et al. (2005) described strategic orientation as the direction that organizations take in developing the appropriate behavior for obtaining superior performance; innovations and competitiveness are the two primary strategic orientations allowing an organization to accomplish higher efficiency in the long term. Furthermore, strategic orientations are crucial for business survival and sustainability because they direct organizations toward achieving their goals; furthermore, researchers in marketing, entrepreneurship, and managerial fields have spent plenty of effort and time attempting to identify these types of orientations (Ogbari et al., 2018).

Strategic principles such as technology, market, learning, and entrepreneurial orientations direct a company's actions and conduct. Nonetheless, there isn't a single, widely recognized explanation of what a firm's strategic orientation is, as various literature streams have generated a variety of perspectives "Orientation" indicates a broad stream of ideas or domains of interest (Hakala, 2011).

2.1.2 Strategic orientations dimensions:

The current study consequently investigates four strategic orientations: learning orientation, market orientation, digital orientation, and entrepreneurial orientation.

1. Learning orientation:

Learning orientation is an organization's approach in the direction of learning, depending on organizational

commitment, vision, and open mind actions (Ashal et al., 2021). Syahdan et al. (2020) explored Learning orientation as an organizational capability to understand customers' demands, learn through experiences, and strive to confront environmental changes. Moreover, learning orientation defined as organizational activities that attempt to improve competitive advantage throughout exploration and exploitation knowledge (Uzoamaka et al., 2020).

According to Senge (1990) learning orientation is the organization's capabilities that concerning about acquiring knowledge and experience about competitors and customers to enhance performance. Learning orientation is "an organization-wide strategy to enhance competitive advantage by creating and using knowledge about customer needs, market changes, and competitor actions, comprising four components: commitment to learning, shared vision, open-mindedness, and intraorganizational knowledge sharing" (Calantone et al., 2002). In the same context, Hakala (2011) explored learning orientation as an organizational capability towards acquiring, sharing, and implement knowledge to acquire a competitive advantage.

2. Market orientation:

Market orientation defined as the degree to which an organization's strategy fulfills its customers' desires and demands (Ashal et al., 2021). Market orientation is a cultural norm in a learning organization, prioritizing customer value creation and stakeholder interests, but may not encourage risk-taking (Slater & Narver, 1994). In the same context, Narver and Slater (1990) explored market orientation theory that comprises three elements: competitor orientation (which measured by competitors' information, high responsiveness to competitors' activities and strategies, and exploit competitors' opportunities), customer orientation (which measured by customers' value, commitment, demands, and satisfaction), and interfunctional coordination. In addition to, Market orientation consists of customer, competitor, and inter-functional coordination dimensions, requiring firms to monitor customer needs, innovate, and implement strategies for competitive advantage (Obeidat, 2016).) According to Tho (2019) marketing orientation is an organization's vital strategic orientation, focusing on understanding three components (competitors, customers, and the macro-environment).

3. Digital orientation:

Digital orientation is an "organization's guiding principle to pursue digital technology-enabled opportunities to achieve competitive advantage, encompassing the dimensions of digital technology scope, digital capabilities, digital ecosystem coordination, and digital architecture configuration" (Kindermann et al., 2021). According to Bendig et al. (2023) digital orientation is a strategic approach to address environmental challenges. It emphasizes the effectiveness of organizations in technologically dynamic environments in digitalizing their business models.

Digital orientation is "the deliberate strategic positioning of an organization to take advantage of the opportunities presented by digital technologies" (Quinton et al., 2018). Moreover, digital orientation is a strategic orientation focusing on digital technologies like social networks and mobile applications, involving strategic changes in business models and aims to foster digital transformation and provide a competitive advantage (Rupeika-Apoga et al., 2022). Zheng (2024) defined digital orientation as a strategic approach to integrating digital technologies into business processes to create improved value.

4. Entrepreneurial orientation:

Entrepreneurial orientation is a strategic orientation that involves practices, processes, and decision-making actions conducting to novel items, relating to proactive, innovation, inventiveness, and risk-taking (Tho, 2019). Alkhawaldeh and Shawabkeh (2023) discussed entrepreneurial orientation as an extensively standard theme in literature, is the process of individuals or groups organizing efforts to confirm value and encounter demands through innovation and inimitability, handling sustainable performance. In the same context, Uzoamaka et al. (2020) mentioned that entrepreneurial orientation involves

decision-making practices promoting creativity, innovation, competitiveness, risk-taking, autonomy, and proactiveness, influencing demand and supply sectors, and driving a free market economy.

2.2. Sustainable Performance (SP)

Sustainability is a popular literature topic, with thousands of articles published annually. However, most focus on the environment, ignoring economic and social aspects. Literature often lacks clarity on measuring and interpreting sustainability performance (Buyukozkan & Karabulut, 2018). Elkington (1998) emphasized the importance of a triple bottom line approach in business strategies, integrating environmental, social, and economic considerations. This approach extends an organization's typical economical approach, prioritizing sustainability plans for future generations and enhancing their economic performance. According to Keeble et al. (2003), stakeholders are pressuring organizations to disclose their social and environmental performance in addition to their financial performance. Van Lieshout et al. (2021) defined Sustainability as the measurable outcomes of managerial and corporate actions pertaining to the firm's interactions with its external environment.

In a globalized marketplace, major businesses comprehend that short-term profit alone is insufficient to be successful and that sustained behavior is critical; to achieve long-term sustainability, organizations have to balance their economic, environmental, and social performance (Stanciu et al., 2014). Furthermore, in the contemporary industrialized world, sustaining performance is crucial for success, including incorporating economic, social, and environmental objectives into fundamental business practices to maximize value (Zhai et al., 2018).

Sustainability performance measures an organization's resource efficiency towards objectives, incorporating societal, economic, and environmental goals into corporate strategies, which gradually enhances profitability (Appiah-Nimo & Chovancova, 2020). Scholars define sustainable performance as an organization's ability to attain remarkable social and environmental performance while fulfilling organizational objectives, legitimacy in the community, customer satisfaction, commitment, and credibility. Additionally, it eliminates expenses, waste, and consumption, which enhances economic performance (Al-Humaidan et al., 2022).

Moreover, Sustainable performance in a business involves fulfilling long-term customer and stakeholder expectations through effective leadership, employee awareness, knowledge acquisition, and creativity. It emphasizes social responsibility and investment in organizations dealing with complex performance standards, including non-financial environmental management and social domain challenges (Stanciu et al., 2014). However, sustainability is multifaceted and complex, encompassing a wide range of factors such as environmental sustainability, consumption of energy, customer satisfaction, and financial outcomes (Sebhatu, 2009). According to Buyukozkan and Karabulut (2018), sustainability performance is a combination of an organization's negative or positive social, environmental, and economic effects measured against predetermined criteria.

This study adopted the definition of sustainable performance as the "observable outcomes of corporate and managerial actions relating to the firm's relationships with its external environment" (Wood, 1991, 693).

2.3 Business Intelligence (BI)

Due to emerging technology, the business intelligence (BI) market is developing, necessitating organizations to adapt their products to consumer needs. BI systems facilitate the spread of knowledge and are critical for business decision-making processes. BI implementation, on the other hand, differs for each organization, demanding modifications of applications, architects, and enablers. User access, data quality, and interaction with other systems are critical for BI success (Heang & Mohan, 2017).

Luhn (1958) has developed business intelligence (BI), an autonomous system for disseminating information using data-processing computers. Cekuls (2022) mentioned that Business intelligence has

appeared since 1950s like a technology based on supporting decision, it is vital means in contemporary business organizations. In the same context, Taifi (2022) declared that the process of decision making is confirmed by business intelligence is imperative for gaining competitiveness and achieving strategic success.

According to Watson (2009), business intelligence (BI) is "a broad category of applications, technologies, and processes for gathering, storing, accessing, and analyzing data to help business users make better decisions". BI is a system comprising technological, human competencies, and business processes, focusing on information collection, storage, decision-making, and supporting specific business processes to enhance business values (Laursen & Thorlund, 2016). Furthermore, Negash and Gray (2008) defined Business intelligence as a system that integrates information from various systems using data warehouses, hardware and software capabilities, and internet technologies. Business Intelligence is the process of converting data into information and knowledge, providing insights for business managers to make tactical decisions (Niwash et al., 2022).

Business intelligence (BI) transforms data into strategic planning information, influenced by organizational, information system, and user perspectives on its usage and success (Awamleh & Bustami, 2023). Scheps (2008, 18) discussed business intelligence (BI) as a framework for improving practical and long-term operational effectiveness that has been made possible by advancements in computer power, storage of data, analytics, reports, and networking technology. In the same context, Howson (2013, 1) defined business intelligence (BI) as a set of tools and processes that enhances business operations, performance, and opportunities but overemphasizes creative thinking, culture, and data over technologies.

The current study adopted the definition of Business intelligence as a "contemporary term for data and software tools for organizing, analyzing, and providing access to data to help managers and other enterprise users make more informed decisions" (Howson, 2013, 49). Furthermore, Business intelligence tools like database querying, online analytical processing OLAP, and data mining help businesses analyze data, uncover patterns, and make informed decisions. They consist of data, infrastructure, analytic toolset, management users, and delivery platforms (Howson, 2013).

3. RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

3.1 Research Model

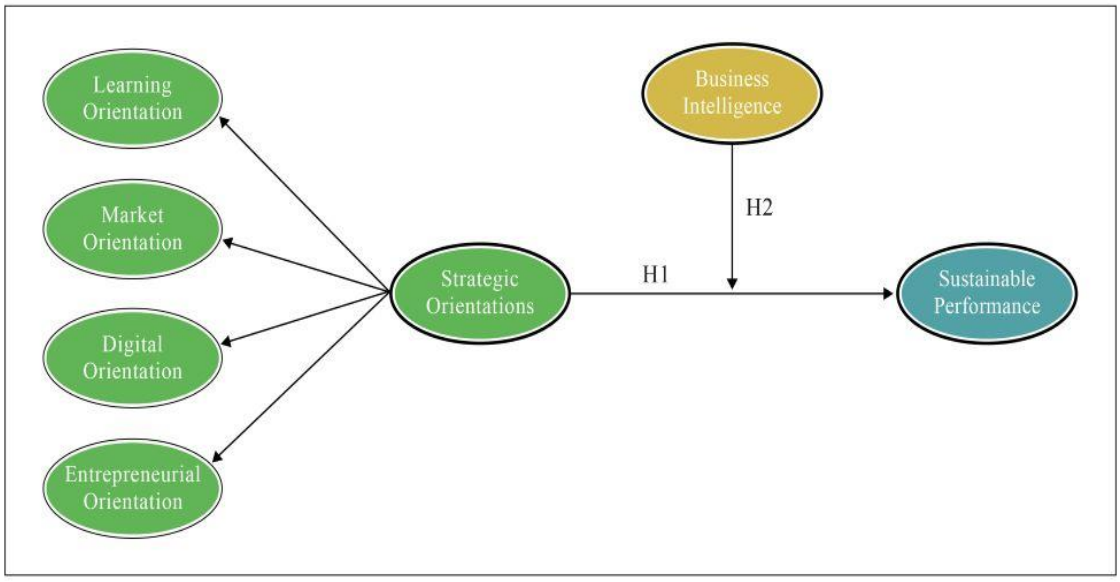

Figure 1. Research Model

3.2 Hypothesis Development

Several studies immediately addressed the noteworthy relationship between strategic orientations and sustainable performance. Strategic orientation is defined as the strategic actions carried out by the organization in order to create and enhance the business's operations for improved performance (Syahdan et al., 2020). Thus, in accordance with the RBV concept, strategic orientations are the fundamental resources and competencies to improve organizational performance.

Al- Humaidan et al. (2022) found that corporate social responsibility positively influences sustainability orientation in Tunisian small and medium enterprises. Habib et al. (2020) studied how knowledge management, market, and entrepreneurial orientations impact green supply chain management strategies and sustainable performance. Tseng et al. (2019) explored the impact of strategic orientations on environmental innovation capabilities and buyer value added in Taiwanese IT companies using marketing strategy and dynamic capacity philosophy. Furthermore, Khizar and Iqbal (2020) highlighted the importance of sustainability orientation for superior performance.

According to Ruiz-Ortega et al. (2023) sustainability orientation positively impacts social, environmental, and economic performance, while environmental hostility negatively affected these aspects. Menaouer et al. (2022) also revealed that knowledge management and business intelligence systems positively impact sustainable performance in the Algerian tourism industry. Cheng et al. (2023) investigated manufacturing organizations' sustainability performance as well as the impact of business intelligence and big data analytics, discovering that business intelligence plays an important role in evaluating big data analytics capabilities, with a beneficial impact on sustainability performance. Moreover, Business intelligence (BI) can enhance performance by detecting and responding to client demands, leading to increased sales and profits, but it requires human participation for analysis and improvement (Howson, 2013, 5- 6).

Muntean (2018) presented a multi-dimensional modeling approach for integrating business intelligence (BI) strategies into sustainable performance, emphasizing the importance of sustainability in business models and performance management systems. Menaouer et al. (2022) found a positive correlation between knowledge management processes and sustainable performance in the Algerian tourism industry and that business intelligence also positively impact sustainability performance. Vafaeinehad (2023) revealed that knowledge management enhances sustainable performance in Tehran stock exchange-listed companies, and modern financial technologies and business intelligence, like block chain, can aid in this process. In the same context, Petrini and Pozzebon (2009) explored the role of business intelligence systems in supporting sustainability management in organizations, focusing on the information planning phase and integrating socio-environmental indicators into sustainability strategies. Andriana et al. (2023) also examined the impact of business intelligence and absorptive capacity on firm performance in the manufacturing industry in Indonesia.

Accordingly, the following hypotheses follow:

H1. Strategic orientations have a significant positive impact on sustainable performance at Jordanian commercial banks.

H2. Business intelligence moderates the relationship between strategic orientations and sustainable performance at Jordanian commercial banks.

4. RESEARCH METHODS:

4.1. Methodology:

The proposed model was evaluated in the current study using a cross-sectional approach. Data has been collected from 12 banks. This study adopted a quantitative design that applied to the deductive approach.

This study relied on the quantitative approach due to its suitability to the study's nature and objectives. It also refers to an attempt to reach accurate knowledge of the elements of the phenomenon by collecting the necessary data related to the phenomenon under research from a group of members of the study population. The study variables were formed by strategic orientations as an independent variable, sustainable performance as a dependent variable, and business intelligence as a moderating variable. Then, this study analyzes the responses of the sample members from the top and middle management levels Jordanian commercial banks based on the study questionnaire to test its hypotheses and answer its questions to reach the results of the study (Saunders et al., 2023, 166; Sekaran & Bougie, 2016, 97).

4.2. Population and Sample:

The study's population consisted of all employees in the top and middle management of Jordanian commercial banks in their main departments in the capital, Amman. There are (12) commercial banks. The study adopted the equal stratified random sampling method; in order to represent all Jordanian commercial banks in the study sample. The number of employees in these banks at the top and middle management levels reached 750 managers. According to Sekaran and Bougie (2016, 295), the study sample consisted of 254 employees. The researcher distributed 264 questionnaires to ensure a greater representation of the study population. Twenty-two questionnaires were distributed for each bank and 224 questionnaires were retrieved. Four of them are not suitable for analysis, so the total number of questionnaires valid for the purposes of data analysis is 218.

4.3 Measures

The questionnaire was utilized in the current investigation to gather primary data. Because the questionnaire can be used with a variety of analysis tools, it has thirty items on a five-point Likert scale. Strategic orientations, the independent variable, were measured using items based on Gatignon and Xuereb (1997), Kindermann et al. (2021), Hakala (2011), Slater et al. (2006), Tseng et al. (2019), Al-Humaidan et al. (2022), Ashal et al. (2021), and Yu and Moon (2021). Sustainable performance, the dependent variable, was constructed using items adapted from Al-Humaidan et al. (2022), Nawi et al. (2020), and Habib et al., (2020). Finally, Heang and Mohan (2017), Husejinovic etal. (2022), and Niwash et al., (2022) designed items to measure the moderating variable (business intelligence).

4.4 Analysis Tool

The study utilized the Statistical Package for Social Sciences (SPSS) program for statistical analysis and testing. Descriptive statistics were used to describe demographic sample members' characteristics and agreement with questionnaire items. The arithmetic mean and standard deviation were used to measure average answers and deviations. Analytical statistics were used to analyze the data, including standard multiple regression analysis, hierarchical multiple regression analysis, the Pearson correlation coefficient, and the autocorrelation test.

5. RESULTS

5.1. Descriptive Statistics

Table 1. Descriptive statistics

Construct	Mean	Standard Deviation	Skewness	Kurtosis
Strategic orientations	4.276	.3199	.423	-.720
Sustainable performance	4.197	.3108	.731	.700
Business intelligence	4.404	.3109	.392	-.895

The results shown in Table 1 indicate that the level of relative importance of strategic orientations at Jordanian commercial banks in general was high. The overall arithmetic mean for strategic orientations reached (4.276), with a standard deviation of (0.3199), while the dependent variable (sustainable performance) was of high relative importance, as the arithmetic mean reached (4.197), with a standard deviation of (0.3108), while the moderating variable (Business Intelligence) had a high relative importance, as the arithmetic mean reached (4.404), and a standard deviation reached (0.319). The high level of relative importance of the studied variables indicates the interest of Jordanian commercial banks in those variables and the extent of the interest of the studied banks in strategic orientations and the trend towards sustainability in performance and adopting business intelligence, especially in light of an environment described by complexity and high competition and surrounded by many challenges. Table 1 also shows that the normal distribution of the studied variables was within the limits of normal proportions, as the rate of Kurtosis was from +2 to -2 and Skewness was low (+1.0) (Hair et al., 2022).

5.2. Measurement Model Evaluation

Multicolinearity test:

The Pearson correlation matrix was used to detect the problem of multiple linear correlations between the sub-dimensions of the independent variable and the moderating variable.

Table 2. Correlations

Construct	LO	MO	SO3	SO4	BI
LO	1				
MO	.732**	1			
DO	.451**	.574**	1		
EO	.601**	.629**	.505**	1	
BI	.329**	.440**	.442**	.404**	1

Note: LO = learning orientation, MO = market orientation, DO = digital orientation, EO = entrepreneurial orientation, BI = business intelligence. **. Correlation is significant (less than 0.80).

Table 2 shows the correlation matrix for the dimensions of the independent variable (strategic orientations) and the moderating variable (business Intelligence), where the correlation coefficient values between those dimensions were all significant values. Statistically, this indicates the absence of the phenomenon of multi-Collinearity, as the value of all correlation coefficients is less than (0.80), which is considered an indication that the sample is free of the problem of high multi- Collinearity (Montgomery et al., 2012, 118). The study found a high correlation coefficient (0.732) between learning orientation and market orientation, indicating the absence of multiple linear correlations. This value is less than 0.80, which indicates high Multicolinearity. To confirm this, the variance inflation factor was calculated for each independent variable to ensure multiple linear correlations.

Table 3. Results of the multiple correlations

Construct	**VIF**	**Tolerance**
Learning orientations	2.320	.431
Market orientations	2.738	.365
Digital orientations	1.571	.637
Entrepreneurial orientations	1.871	.535

Table 3 shows that the variance inflation factor (VIF) values were all greater than 1 and less than 10, and the value of tolerance was limited between 0.1 and 1, which indicates that there is no problem of multiple linear correlation between the study variables (Sekaran & Bougie, 2016, 351).

5.*3.* Reliability:

The reliability coefficient demonstrates the questionnaire items' internal consistency as well as their stability in assessing the characteristics for which they were developed. The study tool's reliability was confirmed based on the study variables and the responses of the surveyed participants regarding the study variables represented by strategic orientations, sustainable performance, and business intelligence by calculating the Cronbach Alpha Coefficient.

Table 4. Reliability

Construct	**Cronbach's Alpha ">0.70 and <0.95"**
Learning orientations	0.810
Market orientations	0.731
Digital orientations	0.795
Entrepreneurial orientations	0.822
Sustainable performance	0.899
Sustainable performance	0.730
Business intelligence	0.703

Table 4 shows the internal consistency coefficient values for the study items, ranging from.866 for strategic awareness to.946 for crisis management. All alpha values exceed the minimum acceptable percentage for statistical analysis, indicating consistency between the study tool paragraphs and reliability. A reliability coefficient value less than 0.60 is considered weak, while a value within 0.70 is acceptable, and a percentage exceeding 0.80 is considered good. Therefore, the study tool's consistency coefficients are considered valid indicators for statistical analysis (Sekaran & Bougie, 2016, 184).

6. HYPOTHESIS TESTING:

In this section of the study, hypotheses were examined, and the first primary hypothesis was examined utilizing standard multiple linear regression. The second primary hypothesis was tested through hierarchical regression.

6.1. Analysis of the first main hypothesis:

To analyze the first main alternative hypothesis, the study utilized the standard multiple regression as follows:

H1. ***Strategic orientations have a significant positive impact on sustainable performance at Jordanian commercial banks.***

Table 5. Model summary

Dependent Variable	Model Summary			ANOVA		
	R	R^2	Adjusted R^2	DF	F Calculated	Sig. F
Sustainable Performance	.666[a]	.444	.433	4	42.447	.000*

Note: * significant at ($\alpha \leq 0.05$)

Table 6. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.243	.257		4.845	.000		
	LO	-.030	.052	-.045	-.575	.566	.431	2.320
	MO	.146	.064	.195	2.301	.022	.365	2.738
	DO	.218	.072	.193	3.015	.003	.637	1.571
	EO	.357	.059	.424	6.070	.000	.535	1.871

a. Dependent Variable: Sustainable Performance

Note: LO = learning orientation, MO = market orientation, DO = digital orientation, EO = entrepreneurial orientation.

The results of table 5 explore that the correlation coefficient (R = 0.666) indicates a positive relationship between strategic orientations and sustainable performance, and the impact of strategic orientations on sustainable performance is statistically significant, as the value of the calculated F is 42.447, with a significance level (Sig = 0.000), which is less than 0.05. It also appears that the value of R^2 = (0.444), which indicates that 44.4% of the variance in sustainable performance can be explained through variance in dimensions of strategic orientations.

As for the coefficients table 6, it showed that the value of beta for learning orientation reached (-.045) and that the value of t was (-.575), with a significance level (Sig = 0.566), which indicates that this dimension is not significant. The value of beta for the dimension (market orientation) reached (0.195), and the value of t for it was (2.301), with a significance level (Sig = 0.022), which indicates that this dimension is significant. The value of beta for the (digital orientation) dimension was (0.193) and the value of t for it was (3.015), at a level of significance (Sig = 0.003), which indicates that this dimension is significant. The value of beta for the (entrepreneurial orientation) dimension was (0.424), and the value of t for it was (6.070), with a significance level (Sig = 0.000), which indicates that this dimension is significant.

Based on the above, the study's results support the first main alternative hypothesis that says: "*Strategic orientations have a significant positive impact on sustainable performance at Jordanian commercial banks*".

6.2. Analysis of the second main hypothesis:

To analyze the second main alternative hypothesis, the study utilized the hierarchical multiple regression as follows:

H2. Business intelligence moderates the relationship between strategic orientations and sustainable performance at Jordanian commercial banks.

Table 7. Model summary

Model	R	R Square	Adjusted R Square	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
1	.666[a]	.444	.433	.444	42.447	4	213	.000 *
2	.673[b]	.453	.440	.009	3.531	5	212	.000 *

Note: * significant at ($\alpha \leq 0.05$).

Table 8. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.243	.257		4.845	.000		
	LO	-.030	.052	-.045	-.575	.566	.431	2.320
	MO	.146	.064	.195	2.301	.022	.365	2.738
	DO	.218	.072	.193	3.015	.003	.637	1.571
	EO	.357	.059	.424	6.070	.000	.535	1.871
2	(Constant)	1.019	.282		3.615	.000		
	LO	-.026	.051	-.039	-.506	.613	.430	2.323
	MO	.127	.064	.169	1.984	.049	.356	2.810
	DO	.187	.074	.165	2.529	.012	.604	1.655
	EO	.342	.059	.406	5.791	.000	.524	1.907
	BI	.111	.059	.111	1.879	.042	.739	1.353

a. Dependent Variable: sustainable performance

Note: LO = learning orientation, MO = market orientation, DO = digital orientation, EO = entrepreneurial orientation, BI= business intelligence

Table 7 displays the results of the hierarchical multiple regression analysis based on two models. The results of the first model based on the first step reflected the presence of a statistically significant impact of strategic orientations on sustainable performance, as the value of (F) reached (F = 42.447) and at a significance level (sig. = 0.000), which is less than 0.05. The value of the coefficient of determination was (R^2 = 0.444), and this indicates that strategic orientations explain (44.4%) of the variance in the dependent variable (sustainable performance), and the rest is attributable to other factors.

In the second step, the moderating variable (business intelligence) was entered into the regression model, where the value of the coefficient of determination R^2 increased by (0.9%) to become (R^2 = 0.453), and this percentage was statistically significant, as the value was (FΔ=3.531) and with a significance level of (Δ Sig F. = 0.000), which is less than (.05). The value of (β = 0.111) for the business intelligence variable was (t = 1.879) with a significance level of (sig. = 0.042), which is less than (.05). This confirms the significant impact of business intelligence in improving the impact of strategic orientations on sustainable performance at Jordanian commercial banks, as the variance percentage improved by (0.9%), rising from (44.4%) to (45.3%).

The results of the coefficients table no. 8 for the second model also indicated that the value of beta for learning orientation reached (-.039) and that the value of t was (-.506), with a significance level (Sig = 0.613), which indicates that the effect of this dimension is not significant. The value of beta for the dimension (market orientation) reached (0.169), and the value of t for it was (1.984), with a significance level (Sig = 0.049), which indicates that this dimension is significant. The value of beta for the (digital orientation) dimension was (0.165) and the value of t for it was (2.529), at a level of significance (Sig = 0.012), which indicates that this dimension is significant. The value of beta for the (entrepreneurial orientation) dimension was (0.406), and the value of t for it was (5.791), with a significance level (Sig = 0.000), which indicates that this dimension is significant. It was also found that the beta value of the modified variable (knowledge sharing) reached (0.111) and the T value reached (1.879) at a significance level of (0.042), which indicates that this dimension is significant.

Based on the above, the study's results support the second main alternative hypothesis that says: "*Business intelligence*

moderates the relationship between strategic orientations and sustainable performance at Jordanian commercial banks".

7. CONCLUSION AND DISCUSSION:

This research examines the moderating role of business intelligence between strategic orientations and sustainable performance at Jordanian commercial banks. Actually, not many research papers explore this relation at banks. According to the findings, strategic orientations have a significant impact on sustainable performance, confirming H1. Many studies have shown a positive relationship between strategic orientations and sustainable performance (Nawi et al., 2020; Appiah-Nimo & Chovancova`, 2020; Cuevas- Vargas et al., 2022; Yu & Moon, 2021; Habib et al., 2020; and Dionysus & Arifin, 2020).

This result consistent with Khizar and Iqbal (2020), who explored the impact of strategic orientation (market orientation, and entrepreneurial orientation) on SMEs' innovation success and sustainable competitive advantage, emphasizing the importance of sustainability orientation for superior performance. In the same context, Van Lieshout et al. (2021) revealed that strategic orientations achieve better performance, while ambidexterity and open innovation promote innovation. Furthermore, the study's result echoes with Ingram et al. (2022), who analyzed the relationship between entrepreneurial orientation and sustainable firm performance in Polish businesses, revealing proactiveness as a key factor in achieving sustainable performance.

The main second hypothesis explored the moderating role of business intelligence on improving the impact of strategic orientations on sustainable performance at Jordanian commercial banks. The results confirm H2; accord with Cheng et al. (2023) who investigated manufacturing organizations' sustainability performance as well as the impact of business intelligence and big data analytics, discovering that business intelligence plays an important role in evaluating big data analytics capabilities, with a beneficial impact on sustainability performance. Moreover, it consistent with Muntean (2018) who explored a multi-dimensional modeling approach for integrating business intelligence (BI) strategies into sustainable performance, emphasizing the importance of sustainability in business models and performance management systems. It also accords with Menaouer et al. (2022) who revealed a positive correlation between knowledge management processes and sustainable performance in the Algerian tourism industry and that business intelligence also positively impact sustainability performance.

The results of the main second hypothesis consistent with Vafaeinehad (2023), who revealed that knowledge management enhances sustainable performance in Tehran stock exchange-listed companies, and modern financial technologies and business intelligence, like block chain, can aid in this process. In the same context, Petrini and Pozzebon (2009) explored the role of business intelligence systems in supporting sustainability management in organizations. Finally, the results accords with Andriana et al. (2023), who also examined the impact of business intelligence and absorptive capacity on firm performance at the manufacturing industry in Indonesia.

8. LIMITATIONS:

The current study encountered many limitations, which are represented by three main limitations. The sample size is relatively small and the population studied was limited to Jordanian commercial banks, which may limit the generalizability of the results. This study also used a questionnaire to collect primary data, and it is possible to adopt other methods such as interview, observation, and case study. In addition, the study encountered a lack of studies linking the relationship between the three variables investigated. Accordingly, the study recommends that future researchers to move towards studying other variables as a moderating variable, such as organizational ambidexterity, visionary leadership, and strategic intelligence in other sectors.

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