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The Role of Power BI Applying in Accounting Financial Performance Analysis: An Analytical Study of the Opinions of a Sample of Employees in Industrial Companies in the Kurdistan Region of Iraq

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Abstract
This research aims to investigate the impact of Microsoft Power BI affects financial performance analysis in industrial firms in the Kurdistan Region of Iraq. As more businesses rely on big data and digital tools to make data-driven decisions, Power BI has become a popular business intelligence tool. The research addresses the lack of real evidence showing how Power BI helps with key financial areas including revenue, expenses, cash flow, profitability, financial health, and investment appraisal.

Keywords:
Power Bi,
Visualization,
Financial Performance
Analysis,
Financial Health.

To investigate this, a quantitative approach was used with a structured questionnaire sent to 20 industrial companies in Erbil, Sulaymaniyah, and Duhok. Out of 87 surveys sent, 78 valid responses were collected. The data was analysis using correlation and regression to examine how Power BI's features like cost reduction, productivity improvement, and competitive advantage relate to financial performance.

The results show that Power BI has a positive impact most financial areas, especially profitability, investment appraisal, and revenue. Among the features studied, competitive advantage had the strongest effect, while cost reduction had a smaller impact.

In conclusion, the study shows that using Power BI to analysis big data in financial processes facilitates better decision-making, faster reporting, and stronger financial control. This highlights the value of BI tools for industrial firms in developing regions and suggests that more companies should adopt digital solutions for financial management.



About the Journal

Zanco Journal of Humanity Sciences (ZJHS) is an international, multi-disciplinary, peer-reviewed, double-blind and open-access journal that enhances research in all fields of basic and applied sciences through the publication of high-quality articles that describe significant and novel works; and advance knowledge in a diversity of scientific fields. <https://zancojournal.su.edu.krd/index.php/JAHS/about>

1. Introduction

The use of financial data has become essential to operational efficiency and strategic decision-making in today's data-driven company environment. For industrial companies working in developing areas like the Kurdistan Region of Iraq, getting and using timely financial information could give them a big edge over their competitors. Microsoft Power BI and other business intelligence (BI) tools have become more important because they let companies combine, analyses, and see financial data in real time. With its easy-to-use interface and data connectivity features, Power BI helps businesses measure important financial KPIs, identify trends, and make informed decisions.

Power BI allows thorough financial monitoring by using integrating many data source, such as spreadsheets, cloud services, and ERP systems. Businesses can hold a watch on their financial health by using interactive dashboards to track things like revenue, expenses, and profit margins. (Ragan, et al., 2022). This stage of information is wanted via a region that is having problem with its operations or its finances. Outdated financial reporting techniques, that are time-consuming, distracting, and guide, have caused troubles for various businesses in the Kurdistan Region. Power BI gives centralized and dependable get admission to important data and allows automate these processes (Heesen, 2022).

However, varies problems exist within the put in implement of Power BI. Many companies face technical problems due to inadequate knowledge or inadequate IT infrastructure. Additional limitations to effective Power BI implementation encompass cultural resistance and a discordance among technology and business needs. Nevertheless, businesses that allocate sources to address those problems regularly see improvements in financial transparency, data precision, and reporting efficiency (Aspin, 2018).

The primary aim of this study is to evaluate the influence of Power BI on financial performance analysis in the industrial sector of the Kurdistan Region. This study aims to evaluate the efficacy of the instruments in monitoring and enhancing the financial dimensions of the center, encompassing cash flow, profitability, expenses, revenues, financial health, and investment appraisal. This study enhances the understanding of business intelligence BI applications in emerging markets by emphasizing the extensive organizational advantages and obstacles associated with Power BI usage.

This part introduces Power BI as a remedy for the deficiencies of conventional accounting systems, especially for obsolete or disjointed reports. It corresponds with the objectives of management accounting and financial reporting to enhance decision utility and facilitate real-time oversight of financial performance. Concepts like as internal control, comparability, and verifiability are implicitly considered.

2. problem Statement

Despite the growing reliance on business intelligence, industrial firms in the Kurdistan Region face difficulties in effectively implementing Power BI.

Highlights the gap between available technology and its underutilization in financial processes. From an accounting lens, it underlines the importance of integrating information systems with financial operations to improve transparency, consistency, and accountability in line with IFRS and internal audit principles.

3. Research Questions

- How does Power BI impact on financial performance analysis in industrial firms?
- How does influence Power BI on revenue, expenses, cash flow, profitability, financial health, and investment appraisal?

4. Objectives

- Define Power BI and its business intelligence functions.
- Identify key dimensions of financial performance analysis.
- Investigate how Power BI Applying Improve financial performance.

5. Significance of the Study

The research highlights how Power BI can improve financial reporting, decision-making, and competitiveness through dynamic dashboards, real-time analysis, and predictive analytics. It also emphasizes the tool's ability to reduce costs, improve productivity, and provide a competitive advantage.

- The study demonstrates scientifically that Power BI enhances financial performance analysis through the integration of AI technologies, real-time dashboards, and automated workflows. This program enhances data accuracy, accelerates decision-making, and incorporates local insights into worldwide research. It transforms conventional finance methods into dynamic, data-driven processes that enhance organizational efficiency.
- Practical Impact: Power BI enables enterprises to monitor their financial performance, identify trends, optimize resource utilization, and swiftly respond to market fluctuations. It is an effective instrument for data-driven decision-making as it aids in risk management and forecasting.

Literature Review

1. Business Intelligence And The Role Of Power BI In Financial Decision-Making

Business intelligence (BI) solutions are vital for enhanced decision-making since they convert raw data into actionable insights. As showed in figure (1). (Collie, & Singh, 2016). According to (Ayuso Garcia, 2023), Power BI is a widely applied product because to its sophisticated analytical capabilities, dynamic visualizations, and ease of integration with numerous data sources. The platform allows strategic making plans and complements data comprehension, whilst also enhancing forecast accuracy and imparting real-time data vital for activate decision-making.



Figure 1. (Collie., & Singh, 2016). *Power Pivot and Power BI.*

Power BI represents a massive transformation in accounting practices. It actions from old fashioned manual structures to more modern automated ones. It may be very vital to give both internal and external stakeholders well timed, relevant, accurate and financial data. Power BI makes audit trails and internal controls better, which makes financial reporting clearer and more trustworthy. Also, the platform meets fundamental accounting standards, like comparison and accurate illustration, by using standardized templates and preserving information updated all of the time.

Power BI is more than just a program; it is a whole system that includes tools, databases, apps, and ways to store, get to, and analyses data. (Sharda et al. 2014), It makes data access more equal and improves general data literacy in businesses by letting people who aren't adept at using technology make dashboards and interactive graphics (Altdorf, 2024). The ability to interact with a wide range of sources, including cloud platforms, SQL databases, and Excel spreadsheets, makes it possible to do dynamic reporting and thorough performance evaluations (Sanabia-Lizarraga, 2024).

From an accounting perspective, Power BI functions as both a data-processing and decision-support system. It enables the extraction, transformation, and loading (ETL) of financial data from disparate systems into unified, insightful reports. Its features support key functions such as financial statement preparation, variance analysis, and KPI tracking, thereby aligning with the modern accountant's role as a strategic advisor.

2. The Outcome Dimensions of Power BI's impact

A. Cost Reduction:

Power BI reduces costs associated with financial reporting by automating manual data collection and reporting tasks. According to (Forrester Consulting, 2020) and (Barnard, 2025), automation via Power BI can lower labor costs by up to 60%, while its cloud-based architecture reduces infrastructure and training expenses. These efficiencies contribute to lean accounting practices and enhance the accuracy of financial records by minimizing human error.

B. Productivity Enhancement:

The tool's self-service analytics capabilities and real-time access to data empower users to focus more on analysis than data gathering. (Ulagaratchagan., 2019) reports that typical users save approximately 1.75 hours per week, leading to faster financial closings and more timely reporting. This shift supports the evolving role of accountants as value-added advisors within the business ecosystem.

C. Competitive Advantage:

Organizations leveraging Power BI gain a strategic edge by responding swiftly to market dynamics through real-time analytics. Early adoption supports predictive modeling and data-driven strategy formulation, aiding in long-term financial planning and operational agility (Soaring Eagle Data Solutions, 2023).

Additionally, Power BI fosters collaboration and breaks down data silos by integrating information from multiple departments, which enhances transparency and supports regulatory compliance. Real-time dashboards enable proactive financial monitoring of liquidity, profitability, and risk, aligning operational efficiency with strategic objectives (Singh & Singh, 2021; Alnoukari & Alhussan, 2021; Bhosale & Sawant, 2020).

3. financial performance analysis

Financial performance analysis is a cornerstone of financial management, aimed at assessing an organization's success in achieving its financial objectives. It encompasses the evaluation of profitability, liquidity, solvency, and operational efficiency through the analysis of financial statements and performance ratios (Dubych, 2024; Kenton, 2024) ;(Khzer and Sabir Jaf, 2023). These evaluations support transparency, accountability, and strategic decision-making by offering insights into an organization's financial strengths and weaknesses ((Jaf, & Rashid,2023; Melicher et al., 2017; Tuovila, 2024; CFA Institute, 2024).

Definition:

Financial performance assesses a business's efficiency in utilizing its resources to generate profit, maintain liquidity, and ensure solvency. This assessment serves both internal and external stakeholders, including investors, creditors, and management, by providing indications of financial viability and sustainability (Dokka, 2024; Liberto, 2024).

Importance:

Financial performance analysis is crucial for guiding reinvestment decisions, development plans, and competitive positioning (Ames, 1998; Alexandru, 2019). Organizations can identify their strengths and shortcomings by analyzing important metrics such as return on assets (ROA), return on equity (ROE), and profit margins (Rashid & Jaf, 2023). (Melvin et al., 2004). It also makes it easier to compare performance, improves communication within the company, and helps with risk management techniques like predicting cash flow and managing debt (Wahab et al., 2024; Solomon et al., 2012; Chrysafis et al., 2024).

4. dimensions of financial performance analysis**A. Revenue Analysis:**

Revenue analysis is a process that supports forecasting and income growth plans by identifying revenue sources, assessing trends, and comprehending consumer behavior. (Litvak, 2024; Dealhub, 2024).

B. Expense Tracking:

Expense tracking is the systematic process of recording, organizing, and analyzing business expenditures, including operational costs, employee reimbursements, and recurring charges Consisting of subscriptions. (Ramamoorthy et al, 2024)

C. Cash Flow Management:

Effective cash flow management promotes financial resilience and ensures liquidity, forecasting, buffer maintenance, and account management are some of the strategies that assist businesses fulfill their commitments and look for investment opportunities (Laghari et al, 2023; Egwu et al, 2021).

D. Profitability Metrics:

Return on assets (ROA), net profit margin (NPM), and gross profit margin (GPM) are example of profitability ratios that are used to assess how well a business turns revenue into profit. these metrics support in the assessment of investment and financial planning. (Nariswari et al, 2020; Mahdi et al. 2020).

E. Financial Health:

The overall financial sustainability and stability of the company are included in this dimension. The firm's capacity to fulfill commitments and attain expansion is shown in the assessment of solvency, liquidity, and long-term investment capacities (kagan, 2014; unsgsa, 2021)

F. Investment Appraisal:

Investment assessment techniques such as net present value (NPV), internal rate of return (IRR), and payback time are employed to assess the viability of a project. These instruments ensure that funds are allocated effectively (TIO Staff, 2024; Brealey, 2020).

6. Hypotheses:

The following are the main hypotheses of this research:

H1. There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between the Power BI tools by by (Reduced Costs, Improved Productivity, Competitive Advantage) and financial performance analysis by revenue analysis at industrial company in Kurdistan region.

H2. There is statistically significant impact at the level of ($\alpha \leq 0.05$) of applying the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) on financial performance analysis by revenue analysis at industrial company in Kurdistan region.

H3. There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) and financial performance analysis by expenses tracking at industrial company in Kurdistan region.

H4. There is statistically significant impact at the level of ($\alpha \leq 0.05$) of applying the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) on financial performance analysis by expenses tracking at industrial company in Kurdistan region.

H5. There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) and financial performance analysis by cash flow management at industrial company in Kurdistan region.

H6. There is statistically significant impact at the level of ($\alpha \leq 0.05$) of applying the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) on financial performance analysis by cash flow management at industrial company in Kurdistan region.

H7. There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) and financial performance analysis by profitability metrics at industrial company in Kurdistan region.

H8. There is statistically significant impact at the level of ($\alpha \leq 0.05$) of applying the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) on financial performance analysis by profitability metrics at industrial company in Kurdistan region.

H9. There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) and financial performance analysis by financial health indicators at industrial company in Kurdistan region.

H10. There is statistically significant impact at the level of ($\alpha \leq 0.05$) of applying the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) on financial performance analysis by financial health indicators at industrial company in Kurdistan region.

H11. There is a statistically significant relationship at the level of ($\alpha \leq 0.05$) between the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) and financial performance analysis by investment appraisal at industrial company in Kurdistan region.

H12. There is statistically significant impact at the level of ($\alpha \leq 0.05$) of applying the Power BI tools by (Reduced Costs, Improved Productivity, Competitive Advantage) on financial performance analysis by investment appraisal at industrial company in Kurdistan region.

Data Collection

The primary data source for this study was obtained directly from industrial enterprises in the Kurdistan Region of Iraq. A systematic, closed-ended questionnaire was developed as the primary study instrument for gathering data on individuals' utilization of Microsoft Power BI for financial performance analysis. The primary financial subjects of the questionnaire included revenues, costs, cash flow, profitability, financial health, and investment evaluation. The questionnaire enquired about the advantages of Power BI, including cost savings, enhanced productivity, and competitive superiority.

To investigate this, a quantitative approach was used with a structured questionnaire sent to 20 industrial companies in Erbil, Sulaymaniyah, and Duhok. Out of 87 surveys sent, 78 valid responses were collected. The enterprises originated from many sectors, including cement production, beverage manufacturing, medicines, steel, and food processing. Furthermore, this study evaluated impacts and analyzed data utilizing the Statistical Package for the Social Sciences (SPSS) software.

This approach allowed the researcher to obtain first-hand, company-level data, ensuring that the analysis is rooted in real-world experience and reflects the actual use of Power BI in the industrial sector of the Kurdistan Region.

Table 1/ list of the names of the companies studied

No	Name	Governorate	Distributed Questionnaire	Returned Questionnaire Forms
1	Mass Cement Company	Erbil	6	5
2	Delta Cement Company	Erbil	5	5
3	Bazian Cement Company	Erbil	5	5
4	Tasluja Cement Company	Erbil	6	5
5	Al Hayat Soft Drinks Company	Erbil	5	4
6	Awamedica	Erbil	4	4
7	Erbil Steel	Erbil	4	3
8	Aleen Company	Erbil	3	3
Total forms from Erbil			38	34
9	Ranya Olive Oil	Sulaymaniyah	4	4
10	Baban	Sulaymaniyah	5	4
11	Bazian Cement	Sulaymaniyah	5	4
12	Life- Sul	Sulaymaniyah	4	4
13	Madina	Sulaymaniyah	4	3
14	Chyaw	Sulaymaniyah	4	4
15	Lira	Sulaymaniyah	5	5
Total forms from Sulaymaniyah			31	28
16	Nirgz	Duhok	4	4
17	Ahram Life	Duhok	4	3
18	Hemn Group	Duhok	4	4
19	Glass Cola	Duhok	3	3
20	Ararat	Duhok	3	2
Total forms Duhok			18	16
Total distributed and respondent forms			87	78

Source (prepared by authors)

Table 1 presents the distribution and return of questionnaire forms across 20 industrial companies located in the three governorates of the Kurdistan Region: Erbil, Sulaymaniyah, and Duhok. A total of 87 questionnaires were distributed, out of which 78 were returned, reflecting a high overall response rate. Erbil-based companies received the largest share, with 38 distributed forms and 34 returned, followed by Sulaymaniyah with 31 distributed and 28 returned, and Duhok with 18 distributed and 16 returned. The forms were proportionally allocated across individual companies in each governorate, ensuring balanced representation from various sectors, including cement, steel, pharmaceuticals, beverages, and food industries. The high return rate indicates strong participation and interest from the companies, contributing to the reliability and validity of the collected data. Some companies did not respond due to time constraints, lack of interest, or concerns about confidentiality. Others may have faced internal challenges, communication issues, or found the questionnaire irrelevant. Despite this, the overall response rate was high, with 78 out of 87 questionnaires successfully returned from the targeted companies.

5-Testing Validity and Reliability

Table number 2 Cronbach's Alpha

Item	Number of phrases	Cronbach's Alpha
Reduced Costs BI	6	0.934
Improved Productivity BI	6	0.933
Competitive Advantage BI	6	0.932
Revenue analysis	6	0.928
Expenses tracking	6	0.941
Cashflow management	6	0.925
Profitability metrics	6	0.928
Financial health indicators	6	0.929
Investment appraisal	6	0.922

Source (prepared by authors)

As a general guideline, a Cronbach's Alpha value of 0.70 or higher indicates acceptable internal consistency for a scale. If the Cronbach's Alpha value for an individual item is lower than the overall Cronbach's Alpha, this suggests that the item contributes positively to the scale's internal consistency and should be retained. Conversely, if the Cronbach's Alpha value is higher than the total alpha when an item is deleted, this may indicate that the item is detracting from the scale's reliability and warrants further examination. In this analysis, all Cronbach's Alpha values if items are deleted are below 0.941, with the highest value occurring when the "Expenses tracking" item is removed. This indicates that the overall Cronbach's Alpha for the scale is approximately 0.94, reflecting excellent internal consistency. Most items contribute positively to the scale's reliability; however, the "Expenses tracking" item shows the weakest consistency with the rest of the scale and may require revision. In contrast, the "Investment appraisal" item is identified as the strongest and most consistent contributor, as indicated by the lowest Cronbach's Alpha value of 0.922 when it is removed.

Testing the hypotheses: first hypotheses Table 3 relationships between the dependent variable, Revenue Analysis, and all three independent variables: Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI

Relationship	Pearson Correlation (r)	Significance (Sig.)	Interpretation
Revenue analysis ↔ Reduced Costs BI	0.567	0.000	A statistically significant moderate-to-strong positive relationship
Revenue analysis ↔ Improved Productivity BI	0.543	0.000	A statistically significant moderate positive relationship
Revenue analysis ↔ Competitive Advantage BI	0.656	0.000	A statistically significant strong positive relationship

Source (prepared by authors)

Table 3 show the results reveal statistically significant positive relationships between the dependent variable, Revenue Analysis, and all three independent variables: Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI. The strongest correlation is observed

with Competitive Advantage BI ($r = 0.656$), indicating that the utilization of Business Intelligence tools significantly enhances revenue analysis by reinforcing competitive positioning. Additionally, the correlations with Reduced Costs BI and Improved Productivity BI are moderate to strong, suggesting that improvements in operational efficiency and cost reduction through Power BI positively influence the depth and quality of revenue analysis. These results highlight how business intelligence plays a strategic role in accounting by showing how it may improve revenue analysis processes. In order to improve the quality of financial reporting and disclosure, it is crucial to include technology and financial analytical tools, like Power BI, into accounting procedures, as indicated by the statistically significant associations. Overall, the findings confirm the idea that using Power BI to minimize costs, increase productivity, and gain a competitive edge significantly adds to more accurate insightful, and data-driven revenue analysis in the accounting field.

Second hypotheses: Table 4 relationships between Expenses Tracking and all three independent variables:

Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI

Relationship	Pearson Correlation (r)	Significance (Sig.)	Interpretation
Expenses Tracking ↔ Reduced Costs BI	0.411	0.000	A statistically significant moderate positive relationship
Expenses Tracking ↔ Improved Productivity BI	0.477	0.000	A statistically significant moderate positive relationship
Expenses Tracking ↔ Competitive Advantage BI	0.310	0.006	A statistically significant weak to moderate positive relationship

Source (prepared by authors)

Table 4. According to the research, there are statistically significant positive relationships between Expenses Tracking and the three independent variables of Competitive Advantage business intelligence, Improved Productivity business intelligence, and Reduced Costs BI. The strongest connection ($r = 0.477$) is seen with Improved Productivity business intelligence, indicating that improving operational efficiency with business intelligence technologies is essential to enabling accurate and effective expense tracking. This research highlights how important business intelligence is for improving resource usage, which helps with cost control and financial monitoring. The link with Reduced Costs business intelligence ($r = 0.411$) further emphasizes the beneficial relationship between improved expense tracking and oversight and cost-reduction tactics made possible by business intelligence. Statistical significance is maintained even though the connection with Competitive Advantage business intelligence ($r = 0.310$) is the weakest of the three. It is still statistically significant. This suggests that, even if competitive advantage might not directly affect expense tracking, it might indirectly do so through better strategic resource allocation and pricing decisions based on business intelligence insights.

Overall, these results confirm that integrating Business Intelligence tools such as Power BI into accounting operations significantly enhances expense tracking and analysis. They further underscore the role of BI in strengthening internal controls, promoting financial accountability, and supporting data-driven decision-making—core principles of modern accounting practices. The findings affirm the value of BI in improving the effectiveness and precision of financial oversight.

Third hypotheses: Table 5 correlations between cash flow management and all three independent variables:

Reduced Costs BI, Improved Productivity BI, and Competitive Advantage

Relationship	Pearson Correlation (r)	Significance (Sig.)	Interpretation
Cash Flow Management ↔ Reduced Costs BI	0.641	0.000	Strong, statistically significant positive relationship
Cash Flow Management ↔ Improved Productivity BI	0.616	0.000	Strong, statistically significant positive relationship
Cash Flow Management ↔ Competitive Advantage BI	0.592	0.000	Strong, statistically significant positive relationship

Source (prepared by authors)

The findings in Table 5 show that cash flow management and the three independent variables—Reduced Costs BI ($r = 0.641$), Improved Productivity BI ($r = 0.616$), and Competitive Advantage BI ($r = 0.592$)—have significant and statistically significant positive associations.

These results indicate that the effectiveness of managing cash flows inside firms is greatly increased by the use of business intelligence (BI) solutions like Power BI. The greatest link was seen with Reduced Costs BI, indicating that cost reductions backed by BI are essential for keeping expenditures under control and cash flow balanced.

In summary, those findings highlight the critical role that business intelligence plays in supporting with financial accounting functions, especially those that include strategic financial planning, short-term cash flow forecasting, and liquidity monitoring. Accurate decision-making is improved and long-term organizational objectives and financial stability are attained by integrating BI technologies into accounting processes.

Furth hypotheses: Table 6 correlations between Profitability Metrics and the three independent variables:

Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI.

Independent Variable	Correlation with Profitability Metrics	Significance (p-value)	Interpretation
Reduced Costs BI	0.618**	0.000	Strong positive correlation. Indicates that BI-supported cost reduction improves profitability by controlling unnecessary expenses.
Improved Productivity BI	0.725**	0.000	Very strong positive correlation. Suggests that enhanced productivity via BI leads to higher profitability through efficiency and process improvement.
Competitive	0.827**	0.000	Strongest correlation.

Independent Variable	Correlation with Profitability Metrics	Significance (p-value)	Interpretation
Advantage BI			Demonstrates that strategic advantages gained through BI significantly boost profitability.

Source (prepared by authors)

Table 6 show the analysis demonstrates strong and statistically significant positive correlations at the 0.01 degree between the dependent variable Profitability Metrics and the three independent variables: Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI. These findings confirm the important role of Business Intelligence (BI) tools, such as Power BI, in improving organizational profitability.

The strongest relationship was observed between Competitive Advantage BI and Profitability Metrics ($r = 0.827$), indicating that leveraging BI to strengthen competitive positioning significantly contributes to improve financial outcomes. Similarly, the correlation with Improved Productivity BI ($r = 0.725$) highlights that operational efficiency, driven by BI applications, has a substantial positive effect on profitability by streamlining processes and reducing waste. In addition, the correlation between Reduced Costs BI and profitability ($r = 0.618$) reflects that BI-supported cost-reduction strategies positively influence profitability by minimizing unnecessary expenses and optimizing resource use.

From an accounting perspective, these results underscore the value of integrating BI tools into financial analysis and decision-making processes. By providing real-time, data-driven insights, BI enhances the quality of strategic planning, financial oversight, and performance evaluation. Ultimately, the use of BI not only supports short-term profitability goals but also contributes to the long-term financial sustainability of the organization.

Fifth hypotheses: Table 7 correlations between Financial Health Indicators and the three independent variables: Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI.

Independent Variable	Correlation with Financial Health Indicators	Significance (p-value)	Interpretation
Reduced Costs BI	0.553**	0.000	Strong positive correlation. Indicates that BI-driven cost reduction contributes to better financial health by improving expense management.
Improved Productivity BI	0.530**	0.000	Strong positive correlation. Suggests that increased productivity through BI positively affects financial stability and operational performance.
Competitive Advantage BI	0.587**	0.000	Strong positive correlation. Demonstrates that leveraging BI for competitive advantage supports overall financial health.

Independent Variable	Correlation with Financial Health Indicators	Significance (p-value)	Interpretation
			and sustainable growth.

Source (prepared by authors)

Table 7 show the results reveal strong and statistically significant positive correlations between the dependent variable, Financial Health Indicators, and all three independent variables: Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI.

The strongest correlation is observed between Competitive Advantage BI and Financial Health Indicators ($r = 0.587$), underscoring the vital role of BI tools in enhancing competitive positioning and consequently improving an organization’s financial health.

The correlation with Reduced Costs BI ($r = 0.553$) indicates that BI-driven cost control strategies positively contribute to financial stability.

Similarly, the correlation with Improved Productivity BI ($r = 0.530$) suggests that operational efficiency improvements facilitated by BI enhance overall financial health.

From an accounting perspective, these findings highlight the essential role of Business Intelligence in providing data-driven insights that improve financial planning, monitoring, and decision-making processes. The integration of BI tools supports sustainable financial performance and strengthens financial accountability.

Sixth hypothesis: Table 8 presents the correlations between Investment Appraisal and the three independent variables: Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI.

Independent Variable	Correlation with Investment Appraisal	Significance (p-value)	Interpretation
Reduced Costs BI	0.762**	0.000	Strong positive correlation indicating cost-reduction strategies via BI improve investment appraisal accuracy.
Improved Productivity BI	0.788**	0.000	Very strong positive correlation suggesting efficiency gains from BI enhance investment decision-making.
Competitive Advantage BI	0.767**	0.000	Strong positive correlation showing competitive advantages through BI positively impact investment evaluation.

Source (prepared by authors)

Table 8 demonstrates a strong and statistically good-sized connection among funding appraisal and the three impartial variables: reduced charges BI ($r = 0.762$), stepped forward productivity BI ($r = 0.788$), and aggressive advantage BI ($r = 0.767$). This relationship signifies that Business Intelligence (BI) technology significantly enhances investment assessment through enabling value manipulate, optimizing operational performance, and improving competitive positioning. These

results illustrate the significance of BI in handing over correct, data-driven insights that resource accountants in growing greater monetary making plans and strategic investment decisions. These findings demonstrate the price of business intelligence equipment in enhancing investment choices from an accounting perspective by means of offering short, correct, and information-driven insights. Incorporating Business Intelligence into accounting activities enhances financial planning, optimizes investment decisions, and elevates overall performance.

Seventh hypotheses: Table 9 Regression dependent Variable (Revenue analysis)

Revenue analysis					
	B0	SE	B1	T	Sig
(Constant)	0.816	0.488		1.670	0.099
Reduced Costs BI	0.239	0.137	0.194	1.748	0.085
Improved Productivity BI	0.247	0.107	0.232	2.320	0.023
Competitive Advantage BI	0.337	0.099	0.401	3.417	0.001
R Square	0.499				
Adjusted R ²	0.479				
Durbin–Watson	2.150				

Source (prepared by authors)

Table 9 show the multiple linear regression analysis examines the impact of three independent variables—Reduced Costs BI, Improved Productivity BI, and Competitive Advantage BI—on the dependent variable, Revenue Analysis. The results indicate that Competitive Advantage BI has the strongest and statistically significant positive effect on Revenue Analysis ($\beta = 0.401$, $p = 0.001$), followed by Improved Productivity BI, which also shows a significant positive influence ($\beta = 0.232$, $p = 0.023$). Reduced Costs BI exhibits a positive but not statistically significant effect ($\beta = 0.194$, $p = 0.085$). The overall model explains approximately 49.9% of the variance in Revenue Analysis ($R^2 = 0.499$), indicating good explanatory power. The Durbin-Watson statistic (2.150) confirms the absence of autocorrelation in residuals, validating the regression assumptions.

From an accounting perspective, these findings emphasize the critical role of Business Intelligence tools—particularly those enhancing competitive advantage and productivity—in improving the accuracy and effectiveness of revenue analysis. Integrating BI into accounting processes thus supports more precise financial reporting and informed decision-making, contributing to better financial performance and strategic planning.

Table 10 show the results of the multiple linear regression analysis indicate varying effects of the independent Business Intelligence (BI) variables on the dependent variable, Expenses Tracking. Both Reduced Costs BI and Improved Productivity BI show statistically significant and positive effects. Specifically, the regression coefficient for Reduced Costs BI is ($\beta = 0.291$, $p = 0.032$), and for Improved Productivity BI is ($\beta = 0.396$, $p = 0.002$), suggesting that the use of BI tools contributes to enhanced monitoring and control of organizational expenses by reducing inefficiencies and operational waste. In contrast, Competitive Advantage BI did not exhibit a statistically significant effect on expenses tracking ($\beta = -0.099$, $p = 0.484$), implying that its influence may be indirect or related to other financial performance aspects rather than direct cost monitoring. The R^2 value of 0.277 indicates that the model explains approximately 27.7% of the variance in expenses tracking. Additionally, the Durbin–Watson statistic (1.910) suggests no serious autocorrelation problem, supporting the reliability of the regression estimates.

These findings underscore the importance of integrating BI tools into accounting systems, particularly for improving expense tracking and achieving operational efficiency. However, the role of strategic BI elements like competitive advantage may require further investigation to assess their indirect impact on financial control and decision-making.

Eighth hypotheses: Table 10 Regression dependent Variable (*Expenses tracking*)

Expenses tracking					
	B0	SE	B1	T	Sig
(Constant)	1.571	0.521		3.012	0.004
Reduced Costs BI	.318	0.146	0.291	2.180	0.032
Improved Productivity BI	0.375	0.114	.396	3.296	0.002
Competitive Advantage BI	- 0.074	0.105	- 0.099	- 0.704	0.484
R Square	0.277	0.248			
Adjusted R ²	0.248				
Durbin–Watson	1.910				

Source (prepared by authors)

Table 10 show the analysis revealed that both **Reduced Costs BI** and **Improved Productivity BI** have a statistically significant positive impact on **Cash Flow Management**, as indicated by the following results:

- **Reduced Costs BI:** Significant positive effect ($\beta = 0.377$, $p = 0.001$), suggesting that BI-supported cost-reduction strategies contribute to better management of cash flows.
- **Improved Productivity BI:** Significant positive effect ($\beta = 0.359$, $p = 0.000$), indicating that operational efficiency enabled by BI enhances control over cash inflows and outflows.

In contrast, **Competitive Advantage BI** did not show a statistically significant effect ($\beta = 0.146$, $p = 0.194$), implying that its influence on cash flow may be indirect or long-term. The R² value of **0.549** indicates that the model explains approximately 55% of the variance in cash flow management. The **Durbin–Watson** statistic (1.692) suggests that there are no issues with autocorrelation among the variables. These findings highlight the importance of integrating Business Intelligence tools into accounting practices to enhance liquidity control and fulfill short-term obligations, particularly through effective cost management and productivity improvements.

Nineth hypotheses: Table 11 Regression dependent Variable (Cashflow management)

Cashflow management					
	B0	SE	B1	T	Sig
(Constant)	0.387	0.437		.885	0.379
Reduced Costs BI	0.438	0.122	0.37 7	3.577	0.001

Improved Productivity BI	0.360	0.095	0.35 9	3.780	0.000
Competitive Advantage BI	0.116	0.088	0.14 6	1.311	0.194
R Square	0.549				
Adjusted R ²	0.531				
Durbin–Watson	1.692				

Source (prepared by authors)

Table 11 show the results indicate a strong and statistically significant positive impact of:

Improved Productivity BI on profitability ($\beta = 0.378$, $p = 0.000$), suggesting that productivity enhancements enabled by BI tools such as Power BI contribute significantly to higher efficiency and revenue growth, thereby improving profitability.

Competitive Advantage BI shows the strongest influence ($\beta = 0.582$, $p = 0.000$), reflecting that achieving a competitive edge through BI strongly supports financial performance and profitability enhancement. In contrast, Reduced Costs BI does not show a statistically significant effect ($\beta = 0.058$, $p = 0.425$), indicating that cost reduction alone may not have a direct impact on profitability within this model. The R Square value of 0.791 indicates that approximately 79.1% of the variance in profitability is explained by the model, representing a high explanatory power. The Durbin–Watson value of 1.944 suggests no serious autocorrelation issues among residuals.

These findings highlight the critical role of Business Intelligence tools in enhancing profitability by enabling precise performance analysis and supporting strategic decision-making. Integrating BI tools like Power BI into accounting systems strengthens operational productivity and competitive positioning, which are key drivers of financial success.

Tenth hypotheses : Table 12 Regression dependent Variable (Profitability metrics)

Profitability metrics					
	B0	SE	B1	T	Sig
(Constant)	-0.070	0.338		-0.207	0.836
Reduced Costs BI	0.076	0.095	0.05 8	0.803	0.425
Improved Productivity BI	0.431	0.074	0.37 8	5.851	0.000
Competitive Advantage BI	0.523	0.068	0.58 2	7.665	0.000
R Square	0.791				
Adjusted R ²	0.782				
Durbin–Watson	1.944				

Source (prepared by authors)

Table 12 show the results demonstrate that all three independent variables have a **statistically significant positive effect on Financial Health Indicators**, as follows:

Reduced Costs BI has a significant effect ($\beta = 0.245$, $p = 0.040$), indicating that implementing BI tools to reduce costs contributes positively to improving financial stability.

Improved Productivity BI also shows a significant impact ($\beta = 0.260$, $p = 0.017$), suggesting that operational efficiency achieved through BI strengthens the organization's financial health.

Competitive Advantage BI has a notable effect ($\beta = 0.282$, $p = 0.026$), implying that leveraging BI to gain strategic advantage plays an important role in enhancing financial well-being.

The **R Square value is 0.439**, meaning that approximately **43.9%** of the variance in Financial Health Indicators is explained by the three BI-related variables. The **Adjusted R² of 0.416** confirms the model's moderate explanatory power. The **Durbin–Watson value of 2.208** indicates no concern for autocorrelation in the residuals, supporting the validity of the regression model.

These findings underscore the importance of integrating Business Intelligence tools into accounting and financial decision-making processes. BI enables cost control, productivity enhancement, and strategic positioning, all of which are essential for maintaining and improving the financial health of an organization. The results support the role of data-driven decision-making in strengthening the financial oversight and sustainability of accounting practices.

Eleventh hypotheses: Table 13 Regression dependent Variable (Financial health indicators)

Financial health indicators					
	B0	SE	B1	T	Sig
(Constant)	1.321	0.429		3.078	0.003
Reduced Costs BI	0.251	0.120	0.245	2.089	0.040
Improved Productivity BI	0.230	0.094	0.260	2.453	0.017
Competitive Advantage BI	0.197	0.087	0.282	2.272	0.026
R Square	0.439				
Adjusted R ²	0.416				
Durbin–Watson	2.208				

Source (prepared by authors)

Table 13 show the results indicate a strong and statistically significant positive effect of all independent variables on investment appraisal, as follows:

Reduced Costs BI has a significant positive effect ($\beta = 0.365$, $p = 0.000$), indicating that cost-reduction strategies supported by Business Intelligence tools such as Power BI significantly enhance the accuracy and efficiency of investment appraisal processes.

Improved Productivity BI shows the strongest positive effect ($\beta = 0.469$, $p = 0.000$), suggesting that operational efficiency improvements driven by BI play a key role in more effective investment decision-making.

Competitive Advantage BI also demonstrates a significant positive impact ($\beta = 0.268$, $p = 0.000$), implying that BI-driven competitive advantages contribute to better strategic investment evaluations.

The R Square value is 0.854, meaning that 85.4% of the variation in investment appraisal can be explained by the three independent variables, reflecting a highly predictive model.

The Adjusted $R^2 = 0.848$, confirming the model's reliability even after adjusting for the number of predictors.

The Durbin-Watson value = 1.855, indicating that there is no serious autocorrelation issue in the residuals, which is favorable for the validity of the model.

These results highlight the critical role of Business Intelligence tools (like Power BI) in enhancing investment appraisal within accounting practices. BI provides accurate, real-time, and analyzable data that supports informed and data-driven investment decisions. This, in turn, improves long-term financial planning, reduces investment risks, and strengthens overall financial performance.

Twelfth hypotheses: Table 14 Regression dependent Variable (investment appraisal)

investment appraisal					
	B0	SE	B1	T	Sig
(Constant)	-0.793	0.267		-2.973	0.004
Reduced Costs BI	0.455	0.075	0.36 5	6.089	0.000
Improved Productivity BI	0.505	0.058	0.46 9	8.688	0.000
Competitive Advantage BI	0.228	0.054	0.26 8	4.231	0.000
R Square	0.854				
Adjusted R^2	0.848				
Durbin–Watson	1.855				

Source (prepared by authors)

Conclusion:

- Theoretical conclusion

1. Power BI is a transformational platform, not only a data display tool. It takes complex, raw financial data and converts it into interactive dashboards and visually reports attractive. This change allows the decision makers to quickly understand complex financial conditions and remove the insight that would be difficult to spot in their raw form.

2. From an accounting perspective, Power BI accelerates financial reporting and increases its accuracy. Automating data collection and organization, it reduces human error and ensures that financial reports, such as revenue analysis and expenditure are tracked, accurate, and updated. This frees the valuable time for accountants.

3. Power BI integrates data from several sources, such as databases and cloud services in the same location. This consolidation eliminates the disadvantages of fragmented systems and provides a broad, integrated approach to the financial status of the organization, which supports decision making in all departments.

4. Power BI can increase the competitive advantage of an organization by enabling data-Powered decisions. The insights obtained from visual reports help managers evaluate performance, identify improvement opportunities and manage risks more effectively, leading to be smart and more informed financial decisions.

5. Using Power BI helps reduce costs and increase productivity. By automating reporting and data analysis tasks, employees can focus their efforts on more valuable tasks, that require significant thinking rather than compiling data manually.

6. Power BI empowered financial analysts to make intensive analysis through advanced data modeling tools. These tools allow for the creation of relationships between different datasets,

facilitating the analysis of complex financial metrics like profitability and investment appraisal, thereby supporting future financial planning.

7. Power BI makes financial data accessible to non-technical users, allowing them to create sophisticated visualizations and analyses on their own. This promotes collaboration within the organization, allowing professionals from different departments to understand independently and analyze financial data.

- Practical conclusion

1- The results confirm significant positive relationships between Business Intelligence tools (cost reduction, productivity improvement, and competitive advantage) and key financial indicators. BI tools enhance revenue analysis, expense tracking, cash flow management, profitability, financial health, and investment appraisal. From an accounting perspective, integrating BI supports more accurate planning, efficient resource use, and data-driven financial decisions, thereby improving overall organizational performance and financial sustainability.

2- The regression analysis confirms that Business Intelligence tools particularly those enhancing competitive advantage and productivity have a significant positive impact on revenue analysis. Competitive Advantage BI has the strongest effect, followed by Improved Productivity BI, while Reduced Costs BI shows a weaker, non-significant influence. The model explains nearly half of the variance in revenue analysis, indicating strong explanatory Power. From an accounting standpoint, these results underscore the value of integrating BI tools to improve revenue assessment, enhance financial reporting accuracy, and support strategic decision-making.

3- The results indicate that Business Intelligence tools significantly enhance expense tracking through cost reduction and improved productivity, as shown by the positive and statistically significant effects of Reduced Costs BI and Improved Productivity BI. However, Competitive Advantage BI does not have a direct significant impact on expense tracking. The model explains 27.7% of the variance, supporting its moderate explanatory, Power. These findings highlight the importance of adopting BI tools within accounting systems to improve operational efficiency and financial oversight, while the strategic role of competitive advantage may influence financial outcomes more indirectly.

4- The analysis confirms that Business Intelligence tools, specifically those aimed at reducing costs and improving productivity, have a significant positive impact on cash flow management. Reduced Costs BI ($\beta = 0.377$, $p = 0.001$) and Improved Productivity BI ($\beta = 0.359$, $p = 0.000$) contribute to better liquidity control and cash flow efficiency. However, Competitive Advantage BI shows no significant direct effect. With the model explaining 55% of the variance ($R^2 = 0.549$), these findings underscore the vital role of BI in supporting accounting practices by improving operational efficiency and financial stability through enhanced cash flow oversight.

5- The findings indicate that Business Intelligence tools specifically, improved Productivity ($\beta = 0.378$, $p = 0.000$) and Competitive Advantage ($\beta = 0.582$, $p = 0.000$) exert a robust and statistically significant positive influence on profitability, as they enhance operational efficiency and foster a competitive edge that bolsters financial performance. On the other hand, Reduced Costs BI does not have a significant direct effect ($\beta = 0.058$, $p = 0.425$). The results show that Business Intelligence plays a key role in supporting profitability by allowing for accurate performance analysis and strategic decision-making within accounting systems. This is shown by the fact that 79.1% of the variance in profitability is explained ($R^2 = 0.791$).

6- The outcomes display that enterprise intelligence (BI) additives which have a fantastic and significant effect on economic health indicators include fee reduction, productivity improvement, and aggressive benefit. This demonstrates how using BI techniques can increase financial stability by reducing expenses, increasing operational effectiveness, and giving aspect. According to the model's explanatory strength ($R^2 = 0.439$), these variables account for almost 44% of the variations in financial well-being. According to the consequences, BI strategies ought to be carried out in accounting to assist human beings make precise, long-term period financial selections. This enhances the enterprise's long-term sustainability and economic tracking.

7- The consequences show that BI equipment, like Power BI, substantially increase the accuracy and efficacy of investment assessment. The first intention was to increase output, which was

followed by cutting charges and gaining a competitive advantage. The version shown strong predictive strength, accounting for 85.4% of the version in the funding assessment. These outcomes reveal how crucial AI technology is for helping humans make informed funding alternatives, decreasing risk, and enhancing long-term accounting monetary financial performance.

Recommendations

1. The researcher recommends that business firms put into effect business intelligence (BI) abilities in their accounting and economic management structures to improve the precision of financial planning and optimize aid usage.
2. Industrial corporations must priorities the improvement and utilization of commercial enterprise intelligence tools that improve strategic decision-making and revenue analysis, considering that technology substantially impacts each area.
3. To adapt to the evolving nature of commercial manufacturing settings, it is really helpful to utilize enterprise intelligence solutions to reduce prices and decorate efficiency through advanced expenditure tracking and financial oversight.
- 4- Industrial enterprises have to employ business intelligence solutions to enhance cash glide management, ensuring monetary balance and extended liquidity in an ever-evolving market.
5. Industrial businesses should make improving productiveness and aggressive gain through business intelligence technologies a pinnacle precedence. These technologies are what pressure profitability boom and better financial overall performance. The look at shows that commercial groups use BI equipment to enhance their economic fitness by using combining fee-slicing, operational performance, and competitive positioning.
6. It is important for industrial companies to rely on BI tools to enhance investment appraisal processes, enabling timely and accurate data-driven financial decisions, reducing investment risks, and supporting long-term financial sustainability.

limitations of the Study

This study is subject to several delimitations that define its scope and focus. Firstly, the research is limited to analyzing the role of Power BI, specifically, as a business intelligence tool in enhancing financial performance analysis. Other BI tools are not considered in this study.

Secondly, the study is confined to industrial companies operating within the Kurdistan Region of Iraq. As such, the findings may not be generalizable to companies in other sectors (e.g., services, finance, or agriculture) or geographical areas outside this region.

Thirdly, the analysis focuses on six core dimensions of financial performance: revenue, expenses, cash flow, profitability, financial health, and investment appraisal. Other financial or operational metrics are beyond the scope of this research.

Additionally, the data were collected using a structured, closed-ended questionnaire distributed to a sample of industrial firms. Qualitative methods such as interviews or case studies were not employed, which may limit the depth of contextual insights.

Finally, the study is time-bound, reflecting the conditions and perceptions prevalent during the data collection period. Therefore, the results may not fully capture changes in BI applications or financial strategies that occur after this timeframe.

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رۆلی به کارهێنای Power BI له شیکاری ئه داکاری دارایی ژمیریاری تویژینه وه یه کی شیکاری سه بارهت به رای نمونه یه ک له کارمه ندانی کۆمپانیای پیشه سازی له ناوچه ی ههریمی کوردستانی

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پوخته

ئهم تویژینه وه یه ئامانجی ئه وه یه که هه لسه نگانندی کاریگه ری Microsoft Power BI له سه ر شیکردنه وه ی ئه دای دارایی له کۆمپانیا پیشه سازیه کانیه عیراق. له گه ل ئه وه ی که زیاتر له بازگانییه کان پشت به داتای گه وره و ئامرازه دیجیتالییه کان ده به ستن بۆ بریاردانی پشت به داتا، Power BI بوه به ئامرازیکی به ناوبانگی زیره کی بازگانی. تویژینه وه که به ناویشانی "رۆلی جیه جیکردنی Power BI له شیکردنه وه ی ئه دای دارایی: لیکۆلینه وه یه کی شیکاری بۆ رای نمونه یه ک له کۆمپانیا پیشه سازیه کانیه عیراق کوردستانی عیراق"، مامه له له گه ل که موکورتی به لگه ی راسته قینه ده کات که نیشان بدات چۆن Power BI یارمه تی له بواره دارایی سه ره کییه کان وه ک داها، خه رجی، ریزه ی پاره، قازانج، ته ندروستی دارایی، و هه لسه نگانندی وه به ره ینان ده دات. بۆ لیکۆلینه وه ی ئه مه، ریبازی چه ندایه تی به کارهاتوه له گه ل پرسیارنامه یه کی ریکخراو که نیردرا بۆ 20 کۆمپانیای پیشه سازی له هه ولیر، سلیمانی، و دهوک. له 87 پارسه ی که نیردران، 78 وه لامی دروست کۆکرانه وه. داتاگان شیکرانه وه به په یوه ندی و پاشه کشه بۆ بینینی ئه وه ی چۆن تابه ته ندیبه کانیه Power BI وه ک که مکردنه وه ی تیچوون، باشترکردنی به ره مه ینان، و سوودی کبیرکییه په یوه ست ده بن به ئه دای دارایی.

ئه نجامه کان نیشان ده دن که Power BI کاریگه ریه کی ئه رینی له سه ر زۆربه ی بواره داراییه کان هه یه، به تابه تی قازانج، هه لسه نگانندی وه به ره ینان، و داها. له نیو تابه ته ندیبه لیکۆلراوه کان، سوودی کبیرکییه به هیزترین کاریگه ری هه بوو، له کاتیکدا که مکردنه وه ی تیچوون کاریگه ریه کی که متری هه بوو.

له کۆتاییدا، تویژینه وه که نیشان ده دات که به کارهێنای Power BI بۆ شیکردنه وه ی داتای گه وره له پرۆسه داراییه کاندایارمه تی به بریاردانی باشتر، راپۆرتکردنی خیراتر، و کۆنترۆلی دارایی به هیزتر ده دات. ئه مه نخری ئامرازه کانیه BI بۆ کۆمپانیا پیشه سازیه کان له ههریمه په ره سه ندوه کان ده رده خات و پیشنیار ده کات که کۆمپانیا زیاتر چاره سه ره دیجیتالییه کان بۆ به رپوه بردنی دارایی وه ربگرن. **وشه سه ره کییه کان: Power BI، بینین، شیکاری ئه دای دارایی، ته ندروستی دارایی.**

دور تطبیق Power BI في تحليل الأداء المالي المحاسبي

دراسة تحليلية لآراء عينة من العاملين في الشركات الصناعية في إقليم كوردستان العراق

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المخلص

تهدف هذه الدراسة إلى تقييم تأثير استخدام برنامج مايكروسوفت باور بي آي (Power BI) على تحليل الأداء المالي في الشركات الصناعية في إقليم كوردستان العراق. ومع تزايد اعتماد الشركات على البيانات الضخمة والأدوات الرقمية لاتخاذ قرارات مستندة إلى البيانات، أصبح Power BI أداة شائعة في مجال ذكاء الأعمال. وتحمل هذه الدراسة عنوان: "دور تطبیق Power BI في تحليل الأداء المالي: دراسة تحليلية لآراء عينة من الشركات الصناعية في إقليم كوردستان العراق"، حيث تسلط الضوء على النقص في الأدلة الواقعية التي تُبين كيف يساهم Power BI في الجوانب المالية الرئيسية مثل الإيرادات، والمصاريف، والتدفقات النقدية، والربحية، والصحة المالية، وتقييم الاستثمار.

ولتحقيق ذلك، تم اعتماد منهج كمي من خلال استبيان منظم وُزِعَ على 20 شركة صناعية في محافظات أربيل، السليمانية، ودهوك. ومن أصل 87 استبيانًا تم توزيعه، تم جمع 78 استبيانًا صالحًا للتحليل. وقد تم تحليل البيانات باستخدام معامل الارتباط والانحدار لقياس العلاقة بين خصائص Power BI مثل تقليل التكاليف، وتحسين الإنتاجية، وتحقيق الميزة التنافسية، وبين الأداء المالي. وأظهرت النتائج أن Power BI له تأثير إيجابي في معظم الجوانب المالية، خاصة في مجالات الربحية، وتقييم الاستثمار، والإيرادات. ومن بين الخصائص التي تمت دراستها، كانت الميزة التنافسية هي الأكثر تأثيرًا، بينما كان تأثير تقليل التكاليف أقل نسبيًا. وفي الختام، تُبين الدراسة أن استخدام Power BI في تحليل البيانات الضخمة ضمن العمليات المالية يُسهم في تحسين اتخاذ القرارات، وتسريع إعداد التقارير، وتعزيز الرقابة المالية. مما يبرز أهمية أدوات ذكاء الأعمال للشركات الصناعية في المناطق النامية، ويوصي بتبني المزيد من الشركات للحلول الرقمية في إدارة الشؤون المالية.

الكلمات الرئيسية: power BI ، التصور ، تحليل الأداء المالي ، الصحة المالية.

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