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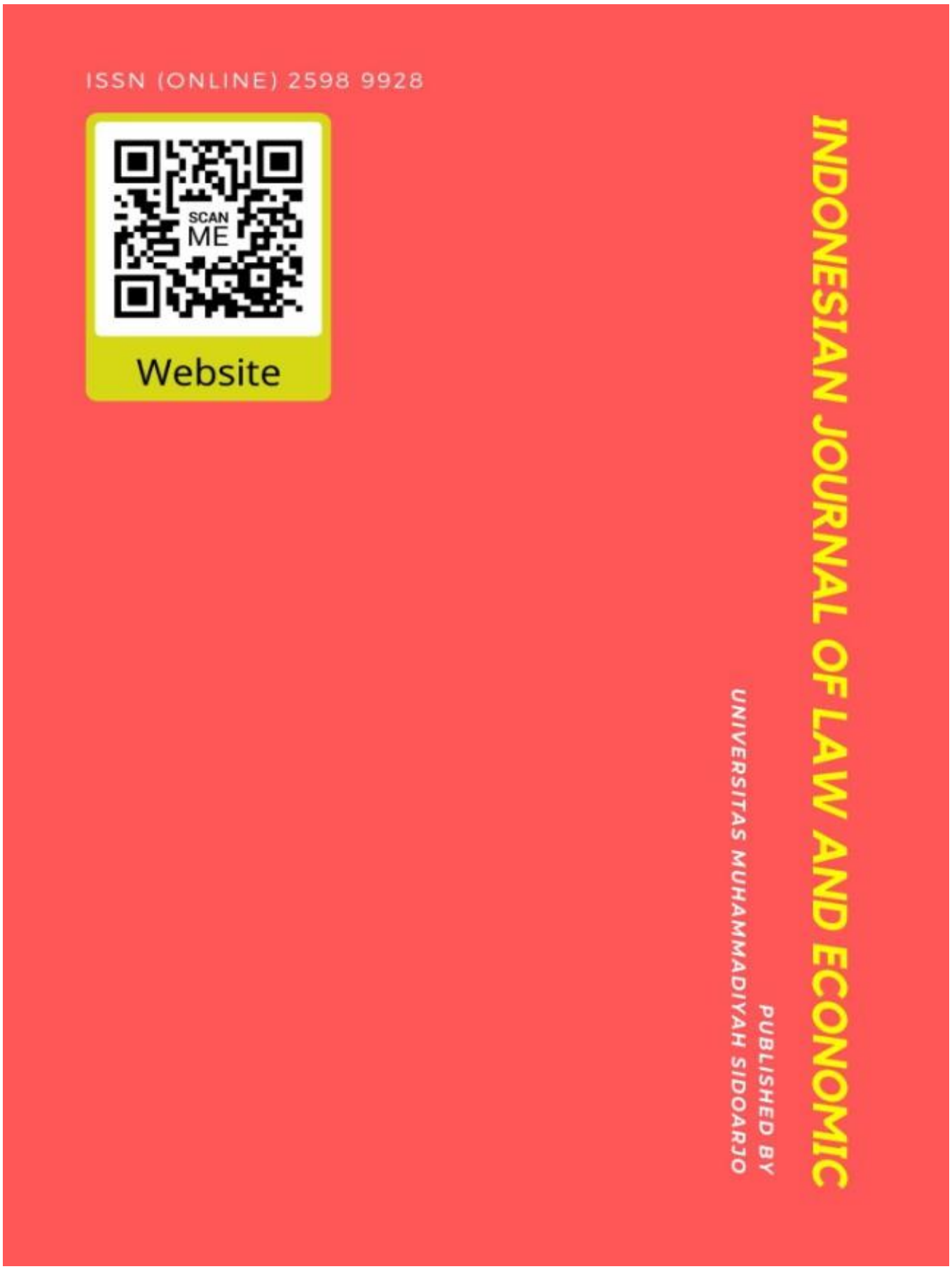

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Accounting Digitalization and Environmental-Social Disclosure in Sustainable Organizations: Evidence from Al-Furat Al-Awsat University

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Abstract

General Background: Organizations increasinglyface mounting pressure to providecomprehensive sustainability reporting beyond traditional financial statements, encompassing carbon footprints, labor conditions, and governance practices. **Specific Background**: This shift coincides with the rapid digitalization of accounting systems, which integrate cloud platforms, AI-assisted analytics, and ERP environments to streamline data processing. **Knowledge Gap**: It remains unclear whether accelerating accounting digitalization genuinely reinforces environmental and social disclosure or if these concurrent trends operate independently. **Aims**: This study investigates the effect of accounting digitalization on the quality and scope of environmental and social performance disclosure at Al-Furat Al-Awsat University in Iraq. **Results**: Surveying 100 accounting faculty, the study confirms a very strong positive correlation (r = 0.820), with a single-predictor regression model explaining 67.2% of the variance in disclosure scores. Data integration emerged as the most critical driver of disclosure quality. **Novelty**: By focusing on the underrepresented Iraqi institutional context, the research provides empiricalevidencethattechnical accounting infrastructure is aprerequisite for crediblenon-financialreporting. **Implications**: The findings suggestthat organizations mustprioritize unified data integration and structured staff training over hardware upgrades to effectively leverage digital systems for sustainability reporting, rather than treating such disclosures as separate, manual tasks.

Highlights:

- Accounting digitalization is a significant predictor of high-quality environmental and social disclosure.
- Data integration represents the highest-leverage intervention for improving non-financial reporting transparency.
- Information security and staff competencies remain the most critical areas requiring institutional investment.

Keywords: Accounting Digitalization, Environmental Disclosure, Social Performance, Sustainable Organizations, Al-Furat Al-Awsat University

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Introduction

Rewind two decades and the accountability expectations placed on most organizations were fairly contained. File your annual report, satisfy the auditors, keep your financial ratios in acceptable territory. That was broadly sufficient. The world has moved on in ways that feel increasingly irreversible. A company's carbon trajectory, its treatment of factory workers, its response to the community it operates in—these things now show up in investment screens, in procurement requirements, in the questions journalists ask, and in the calculations of the people applying for jobs there.

At the same time, accounting functions are undergoing their own transformation. Cloud-based platforms, AI-assisted analytics, real-time dashboards, and ERP environments that span entire organizations have changed what finance teams can actually produce. Tasks that once demanded weeks of manual effort now run overnight. Data that previously lived in departmental silos can be pulled into unified views on demand.

What this study asks is whether these two currents—expanding sustainability reporting expectations on one side, and accelerating accounting digitalization on the other—are genuinely reinforcing each other. Does a more digital accounting function produce better environmental and social disclosure? Or are organizations where both are happening simultaneously just experiencing coincidence rather than causation?

The study context is Al-Furat Al-Awsat University in Iraq, which sits in a region where digital transformation in public institutions is real but uneven. The faculty we surveyed occupy a useful vantage point: they understand the technical architecture of accounting systems and the professional obligations around reporting. Their assessments carry more weight than a general-population survey on questions like these.

Four chapters follow. Chapter One establishes the problem, objectives, boundaries, and hypotheses. Chapter Two works through the theoretical landscape—what accounting digitalization actually is, what drives environmental and social disclosure, and why the two might be connected. Chapter Three presents the findings and interprets them. Chapter Four offers conclusions and what the researcher considers the most actionable recommendations.

Chapter One: Research Methodology

First: The Problem

Here is the gap. Organizations are putting real money into digital accounting tools—cloud migrations, ERP upgrades, analytics platforms. That investment is widely understood to improve financial reporting: faster closes, cleaner data, fewer restatements. What is far less understood is whether the same investment improves non-financial reporting. Specifically, does a more digitalized accounting system make it easier for an organization to report credibly on its environmental footprint and social practices?

The question is not as obvious as it might appear. Accounting software, by design, is optimized for financial data. Energy consumption figures, workforce training hours, community investment tallies, and waste generation statistics don't flow naturally through most ledger systems. There is a genuine question about whether existing digital infrastructure bridges this gap, or whether environmental and social disclosure requires a separate effort that digitalization simply doesn't touch.

The central research question is: What effect does accounting digitalization have on the quality and scope of environmental and social performance disclosure in sustainable organizations? Supporting sub-questions ask about the current digitalization level at the study site, the current disclosure level, whether a statistically meaningful relationship exists, and what form that relationship takes.

Second: Why the Study Matters

For practitioners, the value is evidence. If this study confirms that investing in accounting digitalization pays dividends in disclosure quality—and it does—that justifies including sustainability reporting capability in the business case for digital systems, not treating it as a separate line item. The study also pinpoints the dimensions that are lagging, which is arguably more useful than confirming what is working.

For researchers, the Iraqi and broader Arab institutional context remains substantially underrepresented in the accounting digitalization literature. The dominant empirical base comes from Western and East Asian firms, and the transferability to Gulf and Iraqi institutions is assumed more often than tested. Adding local evidence matters—both for the conclusions it yields and for building a regional body of work that future scholars can extend or challenge.

Third: Objectives

The study is organized around seven objectives: (1) clarify what accounting digitalization means and what its constituent dimensions are; (2) explain environmental and social disclosure and its role in institutional sustainability; (3) gauge the actual digitalization level at the study site; (4) measure current disclosure levels; (5) test the correlation between the two constructs; (6) analyze the direction and size of that relationship; (7) translate findings into practical guidance.

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Fourth: Scope

Subject scope is accounting digitalization as independent variable, environmental-social disclosure as dependent variable, within a sustainability orientation framework. Spatial scope is Al-Furat Al-Awsat University—a setting that concentrates relevant expertise and allowed purposive sampling without hunting across multiple institutions. Human scope is 100 faculty members in accounting, financial management, and banking specializations. Temporal scope is the 2025 academic year. Methodologically, the study uses a descriptive-analytical design with a structured questionnaire analyzed through SPSS.

Fifth: Conceptual Framework

The model is deliberately simple. Accounting digitalization—measured across five dimensions—is hypothesized to drive environmental and social disclosure, measured across two dimensions. The five digitalization dimensions are: digital infrastructure (hardware, networks, cloud services), electronic accounting systems (software, automation, ERP), data integration (cross-departmental data coherence), information security (confidentiality, integrity, availability), and HR digital competencies (staff skills and adaptability). The two disclosure dimensions are environmental (carbon, resources, compliance, sustainability reports) and social (worker rights, transparency, stakeholder relations, CSR, social reports). Figure 1 shows the model structure.

Figure 1: Conceptual Model of the Study. Source: Prepared by the researcher.

DEPENDENT VARIABLE **Environmental & Social Performance Disclosure** Environmental: carbon | resources | compliance | sustainability reports Social: worker rights | transparency | stakeholders | CSR | social reports	**← EFFECT →**	**INDEPENDENT VARIABLE** **Accounting Digitalization** • Digital infrastructure • Electronic accounting systems • Data integration • Information security • HR digital competencies

Sixth: Hypotheses

Correlation group — H1: significant correlation between accounting digitalization and environmental-social disclosure. H1-1: significant correlation with environmental disclosure specifically. H1-2: significant correlation with social disclosure specifically.

Regression group — H2: accounting digitalization exerts a significant effect on combined disclosure. H2-1: significant effect on environmental disclosure. H2-2: significant effect on social disclosure.

Seventh: Sample, Instrument, and Analysis

Population is all accounting, financial management, and banking faculty at Al-Furat Al-Awsat University. Purposive sampling yielded n = 100. The questionnaire had two sections—digitalization (25 items across five dimensions) and disclosure (14 items across two dimensions)—measured on a five-point Likert scale. Statistical analysis ran from frequency tables through means and standard deviations, to Pearson correlations and OLS regression (simple and multiple). All computations used SPSS.

Chapter Two: Theoretical Background

Section One: Accounting Digitalization

Origins and Meaning

The term covers more territory than it might first appear. Accounting digitalization is not simply the adoption of spreadsheet software, or even ERP systems—it is the embedding of digital logic into the full chain of accounting activity, from initial data capture through to disclosure. What that means in practice has changed substantially over time. Early computerization replaced ledger books. Then networked systems replaced isolated desktop applications. Then cloud computing removed the constraint of on-premises infrastructure. Then AI and machine learning began to handle analysis tasks that previously required human judgment and significant time.

Deshmukh (2006) identified the core early on: digital accounting substitutes electronic processes for paper-based ones, using accounting software, cloud platforms, and AI tools. That framing still holds. What Kruskopf et al. (2020) added is that the substitution is not neutral with respect to the accountant's role—when routine processing is automated, the human contribution shifts toward interpretation and oversight rather than data handling. Ahmad (2026) makes a point that connects digitalization to the concerns of this study more directly: digital governance is fundamentally about transparency and accountability, and accounting digitalization is a form of digital governance.

Prasetianingrum and Sonjaya (2024) track the historical progression carefully. Internet-era developments made remote data access and electronic filing possible in the 1990s. Cloud computing, arriving in the following decade, eliminated storage and scaling constraints. AI-assisted analytics, arriving more recently, made it possible to extract insights from datasets too large for human processing. Each wave built on the infrastructure of the previous one—which is why the five dimensions in this

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study's model are interdependent rather than free-standing.

Why Organizations Should Care

The efficiency case is solid and well-documented. Jans et al. (2023) confirm the basic gains: fewer errors, faster processing, more reliable outputs. Organizations implementing robust digital systems feel this quickly, and the benefits compound as integration deepens.

The transparency case is less often made but arguably more important for this study's purposes. Haje et al. (2019) observe that digital accounting systems, when well-designed, can serve non-financial reporting as effectively as financial reporting. The underlying reason is structural: if energy use, waste volumes, and training hours are tracked in the same integrated environment as revenue and costs, producing a sustainability report stops being a separate data-gathering exercise and becomes an output the system can almost generate on its own. That's a substantial change from environments where sustainability data is assembled manually, often by people who do not normally work in finance.

Two other benefits are worth noting. Digital audit trails are harder to manipulate than paper records—which matters for the credibility of any disclosure. And many digital platforms are built to accommodate multiple reporting standards simultaneously, reducing the compliance burden when organizations operate across jurisdictions or want to align with more than one framework.

The Five Dimensions in Detail

Digital Infrastructure: Servers, networks, databases, cloud services—the physical and virtual foundation on which everything else depends. Carrara et al. (2025) found a direct relationship between infrastructure investment quality and accounting output quality in public-sector institutions. Al-Saadi et al. (2026) show that infrastructure capability shapes whether institutions can meaningfully implement complex standards like IFRS 9. Without adequate infrastructure, software investments underdeliver because the data environment is too unstable or fragmented to support them.

Electronic Accounting Systems: The software layer—ERP platforms, dedicated accounting applications, cloud-based tools. O'Leary (2023) describes this as where digitalization becomes felt in day-to-day practice. Well-functioning systems record transactions faster, generate fewer errors, and produce cleaner underlying data. They also enable integration with other organizational systems, which is the precondition for the next dimension.

Data Integration: Whether financial data, HR data, procurement data, and operational data can be brought together coherently. Daraio et al. (2022) argue this is the dimension most directly linked to reporting quality, for a simple reason: fragmented data sources produce fragmented and unreliable reports. Mutawali (2025) makes the same point from a big-data angle—analytical tools only deliver their potential value when the underlying data is unified and consistently formatted. In the context of environmental and social disclosure, integration is especially critical because the relevant data rarely originates in finance: it comes from facilities management, HR, procurement, and operations.

Information Security: Three properties matter—confidentiality (access is limited to authorized parties), integrity (data cannot be altered without authorization), and availability (data can be accessed when needed). Ramiar (2021) frames security as a precondition for trust in any information system. Saleh et al. (2020) provide empirical support: when accounting systems experience security failures, the credibility of their outputs drops, regardless of whether the data itself was compromised. For sustainability disclosure, which increasingly attracts third-party verification, credibility is not optional.

HR Digital Competencies: Technology does not produce better reports—people using technology do. Rohayati (2024) makes the point bluntly: returns on digital investment are bounded by the skill levels of the staff operating the systems. Potemkin and Rasskazova (2020) add dimension to this: digital competence is not simply knowing how to run software. It includes the analytical capacity to interpret outputs, the adaptability to work with systems as they evolve, and the judgment to know when outputs are telling the truth and when something is wrong with the data.

Section Two: Environmental and Social Performance Disclosure

What It Is

Strip away the jargon and environmental and social disclosure is an organization telling the people who care about it what it is doing beyond its financial performance. How much energy it consumes. What it emits into the air. How it treats the people who work for it. What it gives back to the communities it operates in. Whether it operates within the environmental rules that apply to it.

Qiu et al. (2016) situate this as the non-financial complement to financial reporting—information that sits alongside the balance sheet and income statement but addresses dimensions that neither captures. Benlemlih et al. (2018) connect disclosure to risk management: organizations that disclose well tend to manage their environmental and social exposures better, which shows up eventually in financial performance. The disclosure is not decorative—it reflects and reinforces actual management behavior, which is why investors increasingly screen for it.

In university settings this has an additional dimension. Universities shape the professional norms and practices of their graduates. When a university discloses its own environmental and social performance with rigor, it models the behavior it

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teaches. That's not a trivial point for an institution whose mission includes forming the next generation of accountants and managers.

Why It Matters More Now

Lin et al. (2024) trace the global trajectory of environmental and social reporting across annual reports over several decades. The trend is clearly upward, but quality is uneven. The organizations disclosing most comprehensively are those treating it as a genuine management priority, not a compliance checkbox.

Benlemlih et al. (2018) identify the mechanism through which disclosure generates value: it reduces information asymmetry between an organization and its stakeholders, which lowers perceived risk and attracts capital that might otherwise go elsewhere. Lu and Taylor (2018) quantify the reputational dividend—organizations with strong environmental disclosure outperform comparably sized peers on several market-based measures. Al-Shahid et al. (2022) show that social disclosure produces a parallel dynamic among investors focused on ESG criteria. Vale et al. (2024) extend this finding to emerging economies, which matters for the Iraqi context of this study.

Two Distinct Faces

Environmental disclosure addresses the organization's relationship with the natural environment—energy use, carbon emissions, water consumption, waste management, and compliance with applicable regulations. Nor et al. (2016) describe it as an accountability mechanism: it gives stakeholders the information to assess whether the organization is a responsible environmental actor. Al-Shu'bali (2024) notes the persistent variation in how organizations approach this: some treat it as genuine accountability, others as reputation management, and the difference usually shows in the specificity and consistency of what they report.

Social disclosure is broader and harder to standardize. It spans how employees are treated, what the organization contributes to surrounding communities, how it handles relationships with customers and suppliers, and how it upholds ethical commitments. Qiu et al. (2016) identify four core components: worker rights disclosure, community responsibility, consumer protection, and ethical commitment. Each draws on different data sources and requires different reporting approaches, which is part of why social disclosure tends to lag environmental disclosure on standardization.

Section Three: The Connection

The theoretical case is intuitive once you look at what digital accounting systems actually do well: collect data systematically, store it securely, integrate it across organizational units, and produce structured outputs that can be formatted for various standards. Those capabilities map almost exactly onto what good environmental and social disclosure requires. The hypothesis practically writes itself.

Handajani et al. (2023) tested the relationship empirically and found that organizations with more developed digital accounting systems produced better ESG disclosures—not larger ones, better ones. More accurate, more timely, more comparable across periods and peers. The mechanisms they identified included better data collection protocols, easier cross-departmental data flows, and lower per-disclosure reporting costs, which allowed organizations to disclose more without proportionally increasing effort.

Al-Shu'bali (2024) flags an additional capability that emerges at higher levels of digitalization: AI-assisted analysis can detect patterns in environmental and social data that manual review would miss, enabling prospective risk identification rather than purely retrospective reporting. That is a qualitatively different function—shifting disclosure from documentation to foresight—and it requires a mature digital foundation to be credible.

Three theoretical frameworks underpin the expected relationship. Stakeholder theory argues that organizations must meet the information needs of diverse stakeholder groups—something that becomes substantially more manageable with integrated digital systems. Systems theory treats the organization as a set of interconnected processes whose coherence determines output quality—and digitalization explicitly improves that coherence. Resource-based theory frames digital capabilities as strategic assets that shape competitive positioning and performance across multiple dimensions, including disclosure quality (Hair et al., 2019; Sekaran & Bougie, 2020).

Chapter Three: Statistical Analysis and Findings

First: Who Responded

Table 1: Demographic Profile of the Study Sample (n = 100)

Variable	Category	n	Percentage
Gender	Male	59	59%
Gender	Female	41	41%
Qualification	Master's	42	42%
Qualification	Doctorate	58	58%
Experience	< 5 years	15	15%

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Experience	5–10 years	30	30%
Experience	11–15 years	35	35%
Experience	> 15 years	20	20%
Specialization	Accounting	54	54%
Specialization	Financial Mgmt.	46	46%
Academic Rank	Asst. Lecturer	20	20%
Academic Rank	Lecturer	35	35%
Academic Rank	Asst. Professor	30	30%
Academic Rank	Professor	15	15%

Source: Prepared by the researcher using SPSS output.

Males make up 59% of the sample. More important for interpreting the results: 58% hold doctorates. These are not respondents guessing at what digitalization means or how disclosure works—they are specialists. The largest experience band, 11–15 years (35%), is a group that entered the profession before full digitalization and has watched the transformation unfold. Their assessments carry an empirical quality that cross-sectional survey data often lacks.

Second: Descriptive Results — Digitalization

Likert interpretation bands: 1.00–2.33 Low; 2.34–3.67 Moderate; 3.68–5.00 High.

Table 2: Descriptive Statistics — Accounting Digitalization (Independent Variable)

#	Item	Mean	Std. Dev.	Level
Digital Infrastructure				
1	Item 1	3.520	1.176	Moderate
2	Item 2	3.700	1.106	High
3	Item 3	3.420	1.130	Moderate
4	Item 4	3.200	1.062	Moderate
5	Item 5	3.660	1.103	Moderate
	Dimension Mean	**3.506**	**1.126**	**Moderate**
Electronic Accounting Systems				
1	Item 1	3.380	1.162	Moderate
2	Item 2	2.750	1.167	Moderate
3	Item 3	3.900	1.185	High
4	Item 4	3.970	1.159	High
5	Item 5	3.480	1.096	Moderate
	Dimension Mean	**3.496**	**1.230**	**Moderate**
Data Integration				
1	Item 1	3.730	1.270	High
2	Item 2	3.620	1.023	Moderate
3	Item 3	3.340	1.289	Moderate
4	Item 4	3.260	1.021	Moderate
5	Item 5	3.220	0.991	Moderate
	Dimension Mean	**3.434**	**1.140**	**Moderate**
Information Security				
1	Item 1	3.890	1.163	High
2	Item 2	3.220	1.040	Moderate
3	Item 3	3.270	1.014	Moderate

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4	Item 4	3.110	1.136	Moderate
5	Item 5	3.020	1.044	Moderate
	Dimension Mean	**3.302**	**1.120**	**Moderate**
HR Digital Competencies				
1	Item 1	3.230	0.993	Moderate
2	Item 2	3.550	1.038	Moderate
3	Item 3	3.080	1.002	Moderate
4	Item 4	3.090	1.074	Moderate
5	Item 5	3.530	1.039	Moderate
	Dimension Mean	**3.296**	**1.046**	**Moderate**

Source: Prepared by the researcher using SPSS output.

Overall digitalization mean: 3.407. Call it moderate with an asterisk—the asterisk being that two of the five dimensions pull noticeably below the others. Digital infrastructure (3.506) and electronic systems (3.496) are the strongest performers, which is consistent with procurement dynamics: hardware and software get bought through formal channels with defined budgets, so they tend to be more complete. HR digital competencies (3.296) and information security (3.302) are the laggards. Neither is low—but the gap matters when you remember that those two dimensions directly mediate how well the hardware and software actually function in practice.

Third: Descriptive Results — Disclosure

Table 3: Descriptive Statistics — Environmental and Social Disclosure (Dependent Variable)

#	Item	Mean	Std. Dev.	Level
Environmental Disclosure				
1	Item 1	3.280	1.055	Moderate
2	Item 2	3.280	1.036	Moderate
3	Item 3	3.020	1.255	Moderate
4	Item 4	3.010	1.078	Moderate
5	Item 5	3.070	1.075	Moderate
6	Item 6	3.530	1.039	Moderate
7	Item 7	3.210	1.008	Moderate
	Dimension Mean	**3.200**	**1.090**	**Moderate**
Social Disclosure				
1	Item 1	2.870	1.116	Moderate
2	Item 2	3.300	1.020	Moderate
3	Item 3	3.420	1.148	Moderate
4	Item 4	3.270	1.033	Moderate
5	Item 5	3.270	1.053	Moderate
6	Item 6	3.090	1.074	Moderate
7	Item 7	3.020	1.128	Moderate
	Dimension Mean	**3.177**	**1.092**	**Moderate**

Source: Prepared by the researcher using SPSS output.

Both disclosure dimensions come in at moderate levels—environmental at 3.200, social at 3.177. The small gap between them almost certainly reflects the advantage environmental metrics have in standardization: carbon, energy, and water are measured in physical units that translate readily across organizations. Social metrics are messier. The highest-scoring item (3.530, environmental, Item 6) specifically concerns using digital tools to collect environmental data—an early empirical signal that digitalization is already making a difference where it has been applied. The lowest (2.870, social, Item 1—CSR disclosure) identifies where the gap is widest.

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Fourth: Reliability

Table 4: Internal Reliability — Cronbach's Alpha

Dimension	Items	Alpha (α)	Rating
Digital Infrastructure	5	0.977	Excellent
Electronic Accounting Systems	5	0.979	Excellent
Data Integration	5	0.978	Excellent
Information Security	5	0.981	Excellent
HR Digital Competencies	5	0.981	Excellent
Environmental Disclosure	7	0.987	Excellent
Social Disclosure	7	0.988	Excellent
Full Instrument	32	0.990	Excellent

Source: Prepared by the researcher using SPSS output.

Alpha values from 0.977 to 0.990 across all dimensions and the full instrument. This is an unusually clean reliability picture. Items within each scale are measuring a coherent underlying construct, and the findings are stable enough to draw conclusions from.

Fifth: Pearson Correlations (H1, H1-1, H1-2)

Interpretation scale: r < 0.30 weak; 0.30–0.59 moderate; 0.60–0.79 strong; r ≥ 0.80 very strong.

Table 5: Pearson Correlation Matrix — Digitalization vs. Disclosure

Digitalization Dimension	r–Env.	Sig.	r–Soc.	Sig.	r–Total	Sig.
Digital Infrastructure	0.760	0.000***	0.758	0.000***	0.762	0.000***
Electronic Accounting Systems	0.737	0.000***	0.737	0.000***	0.740	0.000***
Data Integration	0.797	0.000***	0.838	0.000***	0.820	0.000***
Information Security	0.786	0.000***	0.778	0.000***	0.784	0.000***
HR Digital Competencies	0.762	0.000***	0.781	0.000***	0.774	0.000***
Accounting Digitalization (Total)	0.795	0.000***	0.806	0.000***	0.820	0.000***

*** p < 0.001 Source: Prepared by the researcher using SPSS output.

The correlation pattern is striking in its consistency. Every dimension, against both disclosure outcomes and their combination, falls in the very strong range. The floor is r = 0.737; the ceiling is r = 0.838. At the aggregate level, r = 0.820—a relationship of that magnitude in survey-based organizational research is not common. Worth noting specifically: data integration produces the highest correlation with social disclosure (0.838), which makes conceptual sense. Social data—employee records, community involvement metrics, CSR expenditures—lives in HR systems, finance systems, and operations simultaneously. Integration is what brings it together into something coherent enough to report. H1, H1-1, and H1-2 are accepted.

Sixth: Simple Linear Regression (H2, H2-1)

Table 6a: Simple Regression Model Summary

Model	R	R^2	Adj. R^2	F | Sig.
Simple Regression	0.820	0.672	0.669	201.015 | 0.000***

Table 6b: ANOVA

Source	SS	df	MS	F	Sig.
Regression	8.577	1	8.577	201.015	0.000***
Residuals	4.182	98	0.043	—	—
Total	12.759	99	—	—	—

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Table 6c: Regression Coefficients

Variable	B	Std. Error	Beta	T	Sig.
Constant	1.064	0.154	—	6.910	0.000***
Accounting Digitalization	0.622	0.044	0.820	14.178	0.000***

Source: Prepared by the researcher using SPSS output.

Regression equation: Disclosure = 1.064 + 0.622 × Accounting Digitalization

R^2 = 0.672. One predictor, explaining two-thirds of the outcome variance—that's a strong single-variable model by any reasonable social science standard. The coefficient B = 0.622 means each unit improvement in digitalization is expected to produce a 0.622-unit improvement in disclosure. The F-statistic (201.015, $p < 0.001$) leaves no doubt about model significance. H2 and H2-1 are accepted.

Seventh: Multiple Regression

Table 7a: Multiple Regression Model Summary

Model	R	R^2	Adj. R^2	F | Sig.
Five dimensions combined	0.846	0.716	0.701	47.436 | 0.000***

Table 7b: Multiple Regression Coefficients — Digitalization Dimensions

Dimension	B	Std. Err.	Beta	t	Sig.	Rank
Constant	1.056	—	—	7.371	0.000***	—
Digital Infrastructure	-0.132	0.145	-0.183	-0.911	0.365	5
Electronic Accounting Systems	-0.073	0.113	-0.104	-0.647	0.519	4
Data Integration	0.500	0.116	0.699	4.298	0.000***	1
Information Security	0.170	0.127	0.223	1.339	0.184	2
HR Digital Competencies	0.169	0.139	0.219	1.220	0.226	3

Source: Prepared by the researcher using SPSS output.

Bringing all five dimensions into the model lifts R^2 to 0.716. Data integration dominates ($\beta = 0.699$, $p < 0.001$)—the only dimension that reaches individual statistical significance in the full model. The practical interpretation is almost mechanical: if the data from finance, HR, operations, and facilities does not flow into a unified environment, there is no coherent source to draw from when building an environmental or social report. Information security ($\beta = 0.223$) and HR competencies ($\beta = 0.219$) rank second and third—both contribute meaningfully even though their individual t-statistics don't clear the threshold, possibly because they are operating through data integration rather than independently. The negative coefficients on infrastructure and electronic systems are a collinearity artifact, not evidence that those dimensions hurt—they share substantial variance with data integration, which absorbs their contribution.

Eighth: Hypothesis Results

H	Statement	Statistic	Sig.	Decision
H1-1	Correlation: digitalization ↔ environmental disclosure	r = 0.795	0.000***	Accepted ✓
H1-2	Correlation: digitalization ↔ social disclosure	r = 0.806	0.000***	Accepted ✓
H1	Correlation: digitalization ↔ total disclosure	r = 0.820	0.000***	Accepted ✓
H2-1	Effect: digitalization → disclosure (simple regression)	F = 201.0	0.000***	Accepted ✓
H2	Effect: five dimensions → disclosure (multiple regression)	F = 47.4	0.000***	Accepted ✓

Five hypotheses. Five acceptances. All at $p < 0.001$. The relationship between accounting digitalization and environmental-social disclosure at Al-Furat Al-Awsat University is real, substantial, and statistically unambiguous.

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Chapter Four: Conclusions and Recommendations

First: What the Study Found

Accounting digitalization at Al-Furat Al-Awsat University sits at a moderate level overall (3.407/5). The picture is not uniform: infrastructure and software are holding up reasonably well, while HR competencies and security are lagging. That imbalance matters because the lagging dimensions are the ones that mediate how effectively the stronger dimensions actually translate into outputs.

Environmental and social disclosure is also moderate (3.189/5). Environmental scores edge ahead of social (3.200 vs. 3.177). Neither dimension is close to where international best-practice frameworks would want to see a university-level institution.

The correlation between accounting digitalization and disclosure is very strong—$r = 0.820$ at the aggregate level ($p < 0.001$). This is a relationship of genuine practical magnitude. A single digitalization predictor explains 67.2% of disclosure variance. Adding the five dimensions separately pushes that to 71.6%. Data integration is clearly the key driver ($\beta = 0.699$). None of the other individual dimensions independently reach significance in the multiple regression, but their combined contribution is real.

All five hypotheses are accepted at $p < 0.001$. Internal reliability is excellent throughout (α range: 0.977–0.990).

Second: Recommendations

Prioritize data integration above everything else. The regression analysis makes the leverage point clear: connecting data across organizational systems—finance, HR, facilities, operations—is the single intervention with the highest expected return for disclosure quality. If financial, environmental, and social data live in separate, disconnected environments, producing comprehensive disclosure will always require significant manual bridging effort. Eliminating that bottleneck is more valuable than upgrading any individual component.

Invest in staff development as a system requirement, not an add-on. HR digital competencies ranked third in the regression but scored second-lowest descriptively. The gap between what systems can do and what staff can extract from them is real and costly. Ongoing structured training—not annual refresher workshops—is what closes it. This is not a soft recommendation; it has hard consequences for output quality.

Fix the security floor. Security scored lowest of all five dimensions, and the implication is not subtle: untrustworthy data cannot support credible disclosure, and data sitting in inadequately secured systems is untrustworthy by definition. This is also increasingly a compliance issue as sustainability disclosure comes under third-party verification requirements.

Adopt a recognized international framework. Neither GRI nor IFRS S1/S2 is universally mandated, but both serve a purpose that internal approaches cannot: they provide a structured template that disciplines what data gets collected, in what format, and on what schedule. Without that structure, even organizations with strong digital infrastructure will produce inconsistent disclosure that is hard to compare or verify.

Make environmental and social disclosure part of the annual reporting cycle formally, not informally. Ad-hoc disclosure is hard to resource and easy to deprioritize. A formal cycle with assigned responsibility and a defined timeline changes the institutional calculus significantly.

Expand the research base. This study is one institution. The patterns here—particularly the dominance of data integration and the under-development of HR competencies—deserve testing across other Iraqi universities to understand whether they are local or systemic. A multi-site comparison would also allow meaningful benchmarking.

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