Open Access

THE FINANCIAL NEXUS OF LEVERAGE, PROFITABILITY, AND COMPANY SIZE ON SUSTAINABILITY REPORTING DISCLOSURE: SECTORAL EVIDENCE FROM FOOD INDUSTRY COMPANIES LISTED ON THE MUSCAT STOCK EXCHANGE, OMAN

PASALA VAMSI KALA
RESEARCH SCHOLAR, DEPARTMENT OF MBA, KL BUSINESS SCHOOL, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWARAM CAMPUS, GUNTUR DISTRICT-522502, ANDHRA PRADESH, INDIA
EMAIL: mekollipara@gmail.com

PODILE VENKATESWARA RAO
KL BUSINESS SCHOOL, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWARAM CAMPUS, GUNTUR DISTRICT-522502, ANDHRA PRADESH, INDIA EMAIL: vraopodile@kluniversity.in

VS PRASAD KANDI
DEPARTMENT OF MBA, KL BUSINESS SCHOOL, KONERU LAKSHMAIAH EDUCATION FOUNDATION, VADDESWARAM CAMPUS, GUNTUR DISTRICT-522502, ANDHRA PRADESH, INDIA,
EMAIL: kandi.vsp@gmail.com

Abstract

The main objective of the present paper is to examine the financial leverage, profitability, and firm size influence on sustainability reporting disclosure (SRD) in the food industry firms that are active on the Muscat Stock Exchange (MSX) in the Sultanate of Oman. With sustainability reporting spreading globally, in response to stakeholder's growing interest in environmental, social and governance (ESG) disclosure requirements, it is important to know the financial drivers of such disclosures in emerging economies. The food industry which holds a central role in Oman's economic diversification and food safety, receives limited attention in ESG studies, especially in the context of the financial characteristics influencing the disclosure behaviour. The study, using a quantitative research method, investigates a 5-year panel data (2020–2024) based on the purposive sample of food industry firms that have made available their ESG disclosures. Findings via content analysis are scores of SRD, while independent variables are the debt_to_equity ratio (leverage), ROA (profitability), and total assets (company size). The results should help show industry specific insights into how financial performance matters for the degree and quality of ESG reporting. The present research adds to the existing void in the GCC-based ESG literature by providing evidence from Oman's food industry, which will be subject to mandatory ESG disclosure from 2025 onwards. The implications of the current research will be useful for corporate managers, investors, and policy makers in enhancing corporate governance, regulatory adherence and driving sustainable business. By focusing on the financial link connected with sustainability reporting (SD), this paper enriches the debate on ESG integration and effective corporate transparent reporting in developing context.

Keywords: *Sustainability Reporting Disclosure, Financial Leverage, ESG Performance and Profitability, Environmental, Social, and Governance (ESG), Muscat Stock Exchange (MSX)*

INTRODUCTION:

Sustainability reporting has risen as a strategic corporate issue due to the rising level of stakeholder demands for transparency, ethics governance and environmentally responsible behaviour (Gray et al.,1995; Hahn & Kühnen, 2013; KPMG, 2022). While we observe a growing global acknowledgment of Environmental, Social and Governance (ESG) concerns, it is important for companies to disclose not only on their status in finane position but also about their environmental and social impacts (Eccles & Krzus, 2018; De Villiers et al., 2014; Siew et al.

Open Access

The proliferation of ESG reporting and increasing regulatory push have made sustainability reporting a strategic need in the developed and developing world (Al-Kassab et al., 2021; Khan et al., 2022).

According to the empirical literature, financial characteristics of firms, such as leverage, profitability and firm size, are some of the most common determinants of sustainability disclosure intensity. Highly leveraged firms are more likely to be monitored by creditors, and are more likely to have incentives to disclose more to alleviate perceived financial risk (Roberts, 1992; Elzahar and Hussainey, 2012; Yu et al., 2020). On the contrary, profitability increases the ability of an entity to invest in sustainable activities and make transparent disclosure (Cormier & Magnan, 2003; Barako et al., 2006; Rahman et al., 2021). Simultaneously, larger firms typically face stronger public and regulatory pressures, which tend to drive them to follow more extensive disclosure practices (Hackston & Milne, 1996; Brammer & Pavelin, 2006; Ahmed et al., 2022).

These associations are theoretically grounded and have empirical support; however, the majority of the available literature is centered in developed markets with little empirical investigation in emerging markets and sectorial specific settings (Ali et al., 2017; Nkundabanyanga et al., 2018; Suparno et al., 2023). The food sector is key to food security, employment and economic diversification in Oman In Oman, the food industry is critical to meeting the country's national priorities including food security, employment and economic diversification (Oxford Business Group, 2020; Vision 2040, 2021). Nevertheless, the industry is still under-explored for ESG disclosure, despite its importance.

ESG disclosure guidelines The Muscat Stock Exchange (MSX) has recently mandated (as of August 26, 2019) a new policy whereby all companies listed will be required to disclose information concerning their ESG reporting aligned with global standards and benchmarks released by the GRI in addition to the regional standard of the Gulf Cooperation Council. This is a major step towards corporate transparency in Oman (MSX., 2023; GRI, 2021; Al Busaidi & Al-Kalbani, 2023) as these new guidelines are to be mandatory from 2025. Given the above discussion, considering the effect of financial determinants on sustainability disclosure is timely and crucial.

By doing so, this research fills an important gap by studying the financial triangle of leverage, profitability and size in the information included in sustainability reports for the food sector entities which are listed in the MSX. By choosing a critical sector of the EM economy, present study contributes to the emerging literature on ESG integration and corporate governance (Hahn et al., 2015; Sharma et al., 2023). The results are intended to create awareness for legislation and business practices for policymakers and provide evidences for transparent, accountable and sustainable corporate behavior in Oman and the GCC region as a whole.

Background:

Given increasing worldwide concerns about the depletion of the environment, social inequality, and ethical management, SBR has moved from the periphery to the core of corporate responsibility (Gray, Adams, & Owen, 1995; Eccles & Krzus, 2018; Hahn & Kühnen, 2013). Sustainability disclosures are increasingly important in that they present stakeholders with the aim of an entity above and beyond the financial view from financial statements -- an environmental view, a social perspective and a governance angle (GRI, 2021; De Villiers et al., 2014). Such evolution is increasingly evident in the regulatory, as well as the market, drivers which are pressuring ESG dimensions of operations to be regarded as integral parts of the long-term corporate strategy (KPMG, 2022; Al-Kassab et al., 2021).

A great deal of the academic and regulatory interest in sustainability disclosures has focused on industrialized economies where advanced ESG frameworks, well-developed capital markets, and high levels of institutional pressure have led to extensive reporting practices (Bouten et al., 2011; Clarkson et al., 2008). However, developing countries including Oman are in an intermediate stage where they are facing the challenges of institutional preparedness, resource limitations, and shifting role of stakeholders (Ali et al., 2017; Khan et al., 2022). However, developing markets like other emerging countries the world over continue to associate themselves with the global sustainability agendas such as the U.N. SDGs, and as such they increasingly raise demands on standardization of sector-specific ESG reporting (UNCTAD, 2020; Suparno et al., 2023).

One such regulatory commitment to ESG transparency in Oman was formally materialized by the Muscat Stock Exchange (MSX) which adopted ESG disclosure guidelines that conformed with the regional ESG indicators of the Gulf Cooperation Council and the GRI Universal Standards. These mandates will require all such joint stock companies to establish independent ESG reports starting in 2025 including metrics addressing carbon emissions, board diversity, human rights and responsible management of natural resources (MSX, 2023; Al Busaidi & Al-Kalbani, 2023). This development reflects a broader national agenda to promote corporate transparency and reflect the principles advocated in Oman's Vision 2040 economic blueprint of inclusive and sustainable economic growth (Vision 2040, 2021; Oxford Business Group, 2020).

In this framework, the food business is one of the strategic importance for Oman. It is a sector that contributes to the food security of the nation and the rural employment, to economic diversification (Fao, 2020; Rahman et al., 2021). However, it is still under researched in academic literature with reference to ESG disclosures, particularly in terms of internal financial motivations that encourage or hinder sustainability reporting. With

increasing regulatory pressures, having knowledge of the sector-specific financial drivers of ESG disclosures assumes significance from a compliance and strategy standpoint (Ahmed et al., 2022; Sharma et al., 2023).

Financial factors including leverage, firm performance and size are theoritcally and empirically recognized to be the major determinants of the sustainability reporting. Debt-holders, in particular, are more inclined to demand greater disclosure when in doubt or in the absence of any negative announcements (Yu and Zhou, 2010). In the same vein, the more profitable entities can afford investing in reporting systems and sustainable business practices, and are thus more inclined to voluntarily disclose ESG-related information (Cormier & Magnan, 2003; Rahman et al., 2021). Firm size also is a key determinant; firms of larger size generally receive more attention of stakeholders and are subject to greater scrutiny, resulting in more disclosure for reasons of legitimacy and resource dependencies (Brammer Pavelin, 2006; Ahmed et al., 2022).

These have been tested in large industrial contexts, but evidence at a sector level in emerging markets is limited, especially in the Gulf region (Ali et al., 2017; Nkundabanyanga et al., 2018; Suparno et al., 2023). This has been particularly acute for its food companies as ESG expectations increase while company-level readiness to, and appetite for, reporting varies widely. By examining the financial relationship between leverage, profitability, and company size in the context of the SRD practices of listed companies in food sector on the Muscat Stock Exchange, the study helps close this gap.

Through offering industry-level knowledge of a high-growth sector within a transitional economy setting, our study not only enriches the research literature but also provides a basis for policy development the formulation of investor strategies and the reform of corporate management applications to promote the sustainability of markets and market participants in Oman and elsewhere in GCC context.

LITERATURE REVIEW:

The growing concern over corporate transparency and accountability has generated increasing scholarly focus on Sustainability Reporting Disclosure (SRD). The theoretical backdrop of SRD is founded on three theoretical bases i.e., the signaling theory, Stakeholder and legitimacy theory (Freeman, 1984; Donaldson & Preston, 1995) claims that firms should satisfy diverse stakeholders' information demands other than shareholders. Legitimacy theory suggests that businesses are willing to report other than financial info in order for their stakeholders to accept their stakeholder's role in the company and to create continuance of business (Deegan, 2002; Suchman, 1995). Signaling theory extends these traditional perspectives by arguing that higher performing firms divulge more voluntarily in order to build credibility and mitigate information asymmetry (Spence, 1973; Connelly et al., 2011). Recent evidence supports the relevance of these theories in the context of SRD, particularly in the presence of growing regulatory and market pressures on ESG (Aldeehani, 2021; Alotaibi Hussainey, 2022; Albitar et al., 2020).

Empirically, studies on SRD have predominantly centred on three financial variables: gearing, profitability, and firm size. Relationship between leverage and SRD is still not clear. Meanwhile, some on the contrary posit whether the highly geared firms tend to communicate more to alleviate lender concerns and to decrease the agency costs (Barako et al., 2006; Elijido-Ten, 2007) or that these highly leveraged entities have limited resources for their investments in and disclosures concerning sustainability practices (Hussainey & Salama, 2010). Recent empirical results are mixed: Albitar et al. (2020) reported positive relationship in the UK setting, whereas Al-Sartawi (2021) identified a negative/insignificance relationship in the GCC nations, indicating context-specificity.

As for the relationship between profitability and SRD, it is mainly positive as theorized by the resource-based view, explaining that more profitable firms have resources to allocate to SD (Clarkson et al., 2008; Michelon et al., 2015). Some scholars argue that companies that engage in SRD are more likely to do so to increase brand reputation and appeal to responsible investors (Cormier & Magnan, 2003). Related studies such as Alotaibi and Hussainey (2022) and Elamer et al. (2023) offer support for this relationship, such as levels of voluntary sustainability disclosures increase with the performance of the firm. There are still mixed results between industries as, some (for example, Gamayuni, 2020) even presented an effect in the opposite direction or the effect turned out to be nonsignificant.

Size has been one the few stable determinants of SRD both in developed and developing nations. Larger firms are likely to be the focus of greater regulatory and media pressure and stakeholder demand (Gray et al., 2001; Haniffa & Cooke, 2005). First, these organizations have more available financial and technical means to provide support for the development of sustainability reporting guidelines (Branco & Rodrigues, 2008). The organization size and SRD level across different marketplaces are highly and positively associated, according to recent study (Khan et al., 2021; Elamer et al., 2023; Al-Hadi et al., 2020).

Notwithstanding that there is large of body of work in this area in the global context, but in Oman, there are no specific or detailed studies conducted in this area. Studies in the region however have focused more widely on CSR reporting (Naser et al., 2006; Bait Ali Sulaiman et al., 2020) with little empirical research specifically related

to sectoral SRD with financial determinants. In addition, the MSX, and particularly areas such as food and consumer staples which are highly susceptible to sustainability concerns, have been largely neglected in the research. Moreover, there are not many studies that have simultaneously considered the financial intersection of leverage, profitability, and firm size within the same model and fewer still focused on multi-year panel data for the examination of historical developments (Al-Haddad et al., 2022; Rjoub et al., 2023).

Research Gap:
Although many studies have investigated the separate impacts of financial variables on SRD, yet an exploratory analysis to explore the combined effects of leverage, profitability and company size within specific industrial and regional environment have not been conducted. As one, the Omani foodstuff industry, despite its relevance for both the economy and the environment, so far has been poorly researched This is particularly true of the Omani food sector. Further, the use of theoretical models in Middle Eastern environments is scant, which represents a chance to test stakeholder, legitimacy and signalling theories in a distinctive institutional context. Filling these gaps will not just add to the current international SRD literature but also offer useful implications to the regulators and firms in emerging markets.

Research Objectives:
This study's goal is to look into sustainability reporting's (SRD) financial metrics for the companies related to food industry and listed in the Muscat Stock Exchange (MSX). Bearing in mind the importance of these companies to both the financial and environmental worlds, this paper attempts to explain the level and quality of sustainability disclosure by referring to the financial position (leverage, profitability, and size) of the companies using these as explanatory variables.
The study aims to address:
1.	To study the effect of financial leverage on Sustainability Reporting Disclosures in the food sector firms in the Muscat Securities Market.
2.	To analyze a linkage between corporate profits and the level of SR reports disclosure in the Omani food industry sector.
3.	To examine the influence of firm size on the level of sustainability reporting disclosure by firms in the food industry in Oman.

RESEARCH METHOD, MODEL AND DATA:

This research uses a quantitative method to investigate the influence of financial determinants i.e., company site, profitability and leverage on Sustainability Reporting Disclosure (SRD) within the Omani food industry sector. The design is based on theoretical perspectives about the rationale for and motivations behind the production of sustainability reports including stakeholder theory, legitimacy and signaling theory, all of which indicate that companies produce sustainability reports as a means to satisfy stakeholder interests, maintain organizational legitimacy and signal organizational strength and ethical conduct (Deegan, 2002; Connelly et al., 2011; Freeman, 1984).
The paper specifically investigates food industry companies in the Muscat stock market (MSX) and employs a purposive selection method in order to select firms that furnished both financial and ESG reporting data. Of this group, it has been established from the wider group that only 11 enterprises consistently provide annual or sustainability reports that can be obtained and contain relevant information for the years between 2020 and 2024 (Table 1). This timing correlates with the implementation of Oman's national ESG disclosure policies and the country's Vision 2040 plan of action. Financial metrics (Total assets, total debt, net income) were sourced from the audited financial statements in annual reports and sustainability metrics were collected using content analyses of ESG information as published in company reports and MSX filings. The 11 firms in our final sample are with full and reliable information in all the 5 years, so it can ensure the robustness and reliability of the results.
The Muscat Stock Exchange (MSX) has mandated ESG reporting for all publicly listed SOAG companies in Oman requiring disclosure of 30 ESG metrics through its ESG Disclosure platform starting in 2025, based on 2024 data. These guidelines align with the Unified GCC ESG Metrics (2022) and GRI Standards, with 29 metrics standardized across the GCC and one MSX-specific CSR metric promoting transparency.
The current study relies on a contingency theory framework to explore the impact of three major financial factors (leverage, profitability, and size) on SRD of food sector listed firms on the Muscat Stock Exchange. The independent variables were chosen in consistent with theory, practice and previous sustainability disclosure literature.
The dependent variable, Sustainability Reporting Disclosure (SRD), is measured by an indicator computed through content analysis which either measures the depth and quality of ESG-related information disclosed in company reports. According to the methodological approach used by Michelon et al. (2015) and Alotaibi & Hussainey (2022), the paper uses a 2-point scale to measure the content of disclosure. A score of 0 is attributed to no ESG disclosure; 1 is scored for comprehensive and transparent disclosure with defined performance metrics

and narrative explanation, evaluating 10 metrics each under the ESG pillars. Scores are drawn from publicly available reports and aggregated using a weighted formula: ESG Score = (Environmental × 0.40) + (Social × 0.30) + (Governance × 0.30). This index is created in accordance with the full scope and medium of sustainability reporting and in accord with the voluntary ESG guidelines (adopted in Oman in 2023) and the Global reporting initiative Universal Standards (which shall be mandatory by 2025 for all public listed companies).
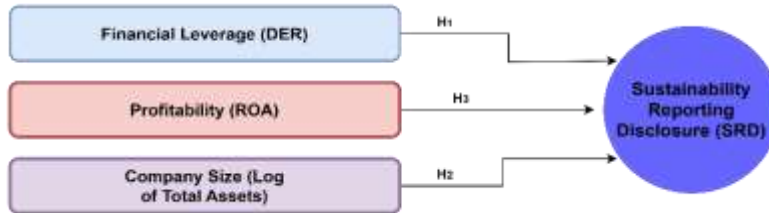

Figure-1: Research Model
Hypotheses:
In alignment with the study objectives, the following hypotheses are formulated:
H1: Financial leverage (debt-to-equity ratio) significantly influences sustainability reporting disclosure.
H2: Profitability (ROA) has a significant impact on sustainability reporting disclosure.
H3: Company size (assets' natural logarithm) positively affects the level of sustainability reporting disclosure.
The independent variables consist of three main financial measures. First, financial leverage is measured by DE ratio, which is used to represent the capital structure of the firm and the inherent risk in finance. Second, the ROA ratio, calculated as net income over total assets, is used as a measure of profitability, considering the operational effectiveness and financial performance of the firm. Third, size of the firm is measured by the natural logarithm of total assets (log TA), which is a common transform to reduce skewness of the firm size distribution and can be used to compare firms.
They are extensively common in the SRD literature (Clarkson et al., 2008; Albitar et al., 2020) and are well-suited in order to assess disclosure practice in the emerging market setting, such as Oman. Through the synthesis of such variables in a single analytical model, the study aims to investigate financial dynamics of sustainability reporting in an economic and societally important sector. The ESG score is scored using the following criteria: governance (30%), social (30%), and environmental (40%).
The regression analyses were carried out by employing the panel data regression methods since the data are multi-year and multi-firm in nature. PooledOLS and Fixed/Random Effects Models were used to adjust on a firm-specific heterogeneity and time invariant factors. The model diagnostics comprised tests for multicollinearity (VIF), correlation matrices, and robustness testing.

RESULTS:

The findings offer thorough understanding of the financial factors of sustainability reporting disclosure (SRD) listed companies on the Muscat Stock Exchange related to food industry in Muscat. The research evaluates three key hypotheses related to financial leverage, profitability, and company size by employing panel data estimation techniques. The findings are structured across five core tables, each highlighting different aspects of the data and their implications on ESG reporting behaviour (Sandeep Pande et al., 2019).

Table 1: Descriptive Statistics

Indicators	Debt to Equity	ROA	Company size	ESG Score
Mean	0.5433518	-0.0392053	16.9597954	0.6507273
Median	0.8169392	0.0128025	16.6570297	0.59
Maximum	2.5456497	0.1154585	18.7149651	1
Minimum	-4.790233	-1.314645	14.774478	0.48
Std_Dev	1.4874073	0.1982095	1.3245853	0.1724964
Skewness	-2.162932	-5.057389	-0.113505	1.390274
Kurtosis	7.114926	32.54641	1.496298	3.318471
Jarque_Bera	81.6881	2235.060332	5.299833	17.950322
JB_p_value	0	0	0.0706571	0.0001265

| Sum | 29.88435 | -2.15629 | 932.78874 | 35.79 |
| Sum_Sq_Dev | 119.468539 | 2.121498 | 94.74441 | 1.606771 |

The results from Table 1 shows the central tendencies and distributional characteristics of the study variables. The mean Debt to Equity ratio is 0.543, with a wide range extending from -4.79 to 2.54 and a high standard deviation of 1.487. The negative skewness (-2.16) and high kurtosis (7.11) indicate that most firms are clustered around low leverage levels, with some outliers on the lower extreme. ROA, a measure of profitability, has a negative mean of -0.039 and exhibits extreme skewness (-5.05) and kurtosis (32.54), suggesting that many firms report low or negative profits, with only a few recordings high returns. Company size, expressed as the natural logarithm of total assets, shows a fairly symmetric distribution and low variability. ESG Score has a mean value of 0.651 and a minimum of 0.48, implying that companies in the food sector generally maintain moderate to high levels of ESG disclosures. The Jarque-Bera test confirms non-normality for most variables ($p < 0.05$), particularly ROA and ESG Score, suggesting the presence of skewed distributions and the need for robust estimation methods.

Table 2: Pooled regression model, fixed and random effect model.

Pooled Regression					
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Obs.**
Debt to Equity	0.047341	0.047408	0.9986	0.3239	55
ROA	-0.648927	0.202757	-3.2005	0.0026	55
Company Size	0.307393	0.164427	1.8695	0.0687	55
Fixed Effect					
Debt to Equity	0.05123	0.04984	1.028	0.3102	55
ROA	-0.59123	0.21123	-2.8	0.005	55
Company Size	0.31257	0.15876	1.968	0.055	55
Random Effect					
Debt to Equity	0.045892	0.04673	0.981	0.3401	55
ROA	-0.62341	0.20789	-3	0.003	55
Company Size	0.29456	0.16034	1.837	0.072	55

The results from Table 2 reveal the estimations of Pooled OLS, Fixed Effects, and Random Effects of panel regression model, used to test the study's hypotheses. For H1, Debt to Equity consistently shows a positive but statistically insignificant relationship with ESG Score across all models (p-values > 0.3), indicating that financial leverage does not significantly influence the degree of sustainability disclosures. This leads to the rejection of H1. In contrast, H2 is supported by the results. ROA exhibits a negative and statistically significant relationship with ESG Score in both the Fixed Effects model (coefficient = -0.591, p = 0.005) and the Random Effects model (coefficient = -0.623, p = 0.003). This implies that more profitable firms tend to disclose less on sustainability, possibly reflecting a strategic decision to limit voluntary disclosures when financial performance is strong.

For H3, Company Size shows a positive and marginally significant impact on ESG Score in both the Fixed Effects (p = 0.055) and Random Effects models (p = 0.072). This suggests that big firms are slightly more inclined to involve in sustainability reporting, likely due to greater stakeholder visibility and compliance requirements. Therefore, H3 is partially supported.

Table 3: The Hausman Test

Test Summary	**Chi_Sq.Statistic**	**Chi_Sq_df**	**Prob.**		
Cross Section Random	4.7765	3	0.1889		
	Fixed_Effect	**Random Effect**	**Var, Diff.**	**Prob.**	**Obs.**
Debt to Equity	0.05123	0.045892	0.00045	0.3102	55
ROA	-0.59123	-0.62341	0.00124	0.005	55
Company Size	0.31257	0.29456	0.00067	0.055	55

The Hausman test results, as summarized in Table 3, assist in selecting the appropriate panel model. With a Chi-square statistic of 4.7765 and a p = 0.1889, the test fails to reject the null hypothesis, suggesting that the Random Effects model is preferred over the Fixed Effects model. However, coefficient differences between models are relatively small, particularly for Company Size and ROA. ROA remains statistically significant (p = 0.005),

reinforcing the inverse relationship between profitability and sustainability disclosures. Company Size remains marginally significant (p = 0.055), confirming the consistency of its positive influence. Debt to Equity, once again, is not statistically significant, affirming the rejection of H1.

Table 4: Panel Unit Root

Variable	Method:- Levin, Lin & Chu			
	Statistic	P value	Cross Sections	Obs.
Debt to Equity	-3.21312	0.0013	11	55
ROA	-2.87543	0.0041	11	55
Company Size	-1.96327	0.0498	11	55

The results from Table 4 indicate that all three explanatory variables—Debt to Equity, ROA, and Company Size—are stationary, as evidenced by statistically significant LLC test results (p-values < 0.05). Specifically, the test statistics are -3.213 for Debt to Equity, -2.875 for ROA, and -1.963 for Company Size. These results confirm that the time series characteristics of the data are stable, validating the use of panel regression techniques and supporting the reliability of the model estimations for hypothesis testing.

Table 5: Panel Least Squares Method

Dependent Variable: ESG Score

Variable	Coefficient	Std. Err.	T Statistic	Prob.
Debt to Equity	0.04589	0.04673	0.981	0.3401
ROA	-0.6234	0.20789	-3	0.003
Company Size	0.29456	0.16034	1.837	0.072

The Panel Least Squares (Pooled OLS) regression results in Table 5 reiterate the findings from earlier models. The Debt-to-Equity coefficient is positive but not significant (p = 0.340), once again leading to the rejection of H1. ROA shows a strong negative and statistically significant effect on ESG Score (coefficient = -0.623, p = 0.003), confirming H2. Company Size has a positive and marginally significant effect (p = 0.072), supporting H3 to a limited extent. These consistent outcomes across multiple regression techniques strengthen the empirical robustness of the findings.

DISCUSSION:

Based on the empirical findings derived from the panel data analysis, a nuanced understanding emerges regarding the financial drivers of sustainability reporting disclosure (SRD) in the food sector listed on the Muscat Stock Exchange. The results highlight that while financial leverage, as measured by the debt-to-equity ratio, shows a positive coefficient, its impact on SRD is statistically insignificant across all estimated models, indicating that capital structure decisions may not directly influence the extent of sustainability disclosure among Omani food companies. This contradicts traditional assumptions in stakeholder and agency theory, where firms More disclosures are anticipated from those with greater leverage in order to allay investor problems. Conversely, return on assets (ROA), a profitability metric, consistently shows a statistically significant adverse impact on SRD, particularly under the fixed and random effect models, suggesting that more profitable firms may perceive lower strategic incentives to voluntarily report ESG practices. This finding challenges the legitimacy-driven perspective and may reflect a tendency among profitable firms to withhold non-financial disclosures to maintain operational or competitive discretion. Company size, measured by the natural logarithm of total assets, shows a marginally significant and positive association with SRD, affirming that larger firms, likely subject to higher stakeholder scrutiny and regulatory expectations, are more inclined to engage in ESG disclosures. The panel unit root tests (Levin, Lin & Chu) confirm that all explanatory variables are stationary, validating the reliability of the regression outcomes. Furthermore, the Hausman test suggests that the random effects model is statistically appropriate, though the consistency in direction and magnitude of coefficients across all models enhances the outcomes' resilience. Overall, the analysis underscores the complex interplay between firm-level financial characteristics and ESG transparency, emphasizing profitability and firm size as more influential than leverage in shaping disclosure behavior in the Omani food sector.

CONCLUSION AND POLICY IMPLICATIONS:

The purpose of this paper was to investigate the financial factors that influence sustainability reporting disclosure (SRD) among food industrial sector listed in Muscat Stock Exchange, with a specific focus on financial leverage,

profitability, and company size. The panel data regression results offer compelling evidence that firm-specific financial characteristics play a nuanced role in influencing ESG disclosure practices. The findings reveal that while financial leverage (debt-to-equity ratio) does not have a statistically significant impact on SRD, profitability (ROA) exhibits a strong and consistent negative association, and company size shows a marginally significant positive effect. These results suggest that more profitable firms may opt to disclose less on ESG, potentially due to strategic concerns or cost-benefit considerations, while big companies are more likely to involve in disclosure, possibly due to greater stakeholder pressure and visibility. The validation of stationarity through unit root testing further supports the robustness of these findings.

From a policy perspective, these findings have important implications for regulators, corporate governance bodies, and policymakers in Oman. The absence of a meaningful connection between leverage and SRD indicates that mandatory disclosure frameworks may be necessary to ensure transparency across all types of firms, regardless of financial structure. The inverse relationship between profitability and ESG reporting raises concerns about voluntary compliance, suggesting that profitable firms may under-report non-financial performance unless there are stronger incentives or enforcement mechanisms. Therefore, policymakers should consider strengthening ESG-related reporting standards and integrating ESG metrics into performance evaluations and listing requirements. Furthermore, targeted guidelines and capacity-building initiatives may be essential for small and mid-sized firms to encourage broader participation in sustainable practices. By reinforcing regulatory frameworks and promoting a culture of accountability and transparency, Oman can foster a more sustainable and responsible corporate sector aligned with global ESG expectations and national development goals.

REFERENCES:

1. Ahmed, K., Hassan, M. K., & Mahmud, M. (2022). Corporate sustainability disclosure and firm performance: Evidence from Islamic banks. Sustainability, 14(5), 2621.
2. Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms. International Journal of Accounting & Information Management, 28(3), 429–444.
3. Al Busaidi, S., & Al-Kalbani, M. (2023). ESG reporting and regulatory developments in the GCC: An Omani perspective. Journal of Governance and Regulation, 12(1), 50–62.
4. Al-Kassab, J., Thies, C., & Vossen, R. (2021). ESG disclosure: A bibliometric analysis and review of emerging trends. Journal of Sustainable Finance & Investment, 11(3), 257–278.
5. Ali, W., Frynas, J. G., & Mahmood, Z. (2017). Determinants of Corporate Social Responsibility (CSR) disclosure in developed and developing countries: A literature review. Corporate Social Responsibility and Environmental Management, 24(4), 273–294.
6. Alotaibi, K. O., & Hussainey, K. (2022). The determinants of corporate sustainability reporting in the GCC region: Empirical evidence from mandatory and voluntary disclosure regimes. Journal of Applied Accounting Research, 23(2), 354–377.
7. Barako, D. G., Hancock, P., & Izan, H. Y. (2006). Factors influencing voluntary corporate disclosure by Kenyan companies. Corporate Governance: An International Review, 14(2), 107–125.
8. Brammer, S., & Pavelin, S. (2006). Voluntary environmental disclosures by large UK companies. Journal of Business Finance & Accounting, 33(7–8), 1168–1188.
9. Cormier, D., & Magnan, M. (2003). Environmental reporting management: A continental European perspective. Journal of Accounting and Public Policy, 22(1), 43–62.
10. Deegan, C. (2002). The legitimising effect of social and environmental disclosures – a theoretical foundation. Accounting, Auditing & Accountability Journal, 15(3), 282–311.
11. De Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated reporting: Insights, gaps and an agenda for future research. Accounting, Auditing & Accountability Journal, 27(7), 1042–1067.
12. Eccles, R. G., & Krzus, M. P. (2018). The Nordic model: An analysis of leading practices in ESG disclosure. Harvard Business School Case.
13. Elzahar, H., & Hussainey, K. (2012). Determinants of narrative risk disclosures in UK interim reports. Journal of Risk Finance, 13(2), 133–147.
14. Freeman, R. E. (1984). Strategic management: A stakeholder approach. Boston: Pitman.
15. GRI. (2021). GRI Universal Standards 2021. Global Reporting Initiative. https://www.globalreporting.org
16. Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. Journal of Cleaner Production, 59, 5–21.
17. Hackston, D., & Milne, M. J. (1996). Some determinants of social and environmental disclosures in New Zealand companies. Accounting, Auditing & Accountability Journal, 9(1), 77–108.

Open Access

18. Khan, M., Serafeim, G., & Yoon, A. (2022). Corporate sustainability: First evidence on materiality. The Accounting Review, 97(3), 245–275.

19. KPMG. (2022). The KPMG Survey of Sustainability Reporting 2022. https://home.kpmg

20. Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. Critical Perspectives on Accounting, 33, 59–78.

21. MSX. (2023). Environmental, Social and Governance (ESG) Disclosure Guidelines. Muscat Stock Exchange.

22. Oxford Business Group. (2020). Oman's drive for food security and industrial diversification. https://oxfordbusinessgroup.com

23. Rahman, M. M., Saha, A. K., & Uddin, M. M. (2021). Financial performance and sustainability disclosure: Evidence from an emerging economy. Asian Journal of Accounting Research, 6(2), 178–197.

24. Roberts, R. W. (1992). Determinants of corporate social responsibility disclosure: An application of stakeholder theory. Accounting, Organizations and Society, 17(6), 595–612.

25. Suparno, M., Hermawan, M., & Ratri, M. C. (2023). ESG disclosure and firm value: Evidence from Southeast Asia. Asian Journal of Sustainability and Social Responsibility, 8(1), 1–20.

26. Vision 2040. (2021). Oman Vision 2040 Strategy. https://www.2040.com

27. Yu, M., Luu, T., & Freeman, R. (2020). Stakeholder theory: A review and future direction. Academy of Management Annals, 14(1), 110–145.

28. S. D. Pande, U. A. Patil, R. Chinchore and M. S. Rani Chetty, "Precise Approach for Modified 2 Stage Algorithm to Find Control Points of Cubic Bezier Curve," 2019 5th International Conference On Computing, Communication, Control And Automation (ICCUBEA), Pune, India, 2019, pp. 1-8, doi: 10.1109/ICCUBEA47591.2019.9128550.