


DISCLOSURE OF ORGANIZATIONAL AMBIDEXTERITY ACTIVITIES AND EARNINGS QUALITY IN OMAN

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 20 February 2023</p> <p>Accepted 08 May 2023</p>	<p>Purpose: This study examines the association between organizational ambidexterity disclosure (OAD) and earnings quality (EQ) in terms of earnings persistence (PER) and value relevance (VR).</p> <p>Theoretical framework: Organizational ambidexterity disclosure (OAD) is one type of forward-looking disclosure (FLD) which includes all information about exploration and exploitation activities. In accounting, the study is interested in how (OAD) affects the firm's earnings quality.</p> <p>Design/methodology/approach: This study uses the secondary data of non-financial industrial and services firms listed on the Muscat Securities Market (MSX) in Oman for a 5-year period from 2017–2021. The study uses generalized least square (GLS) and feasible general least squares (FGLS) regressions to test the hypotheses and find the results.</p> <p>Findings: Results of the GLS and the robust results of FGLS show that OAD has a positive and significant effect on earnings persistence (PER) and value relevance (VR) and the coefficient of VR is stronger than the coefficient of PER, indicating the importance of OAD on the earnings quality as new evidence in the area of accounting.</p> <p>Research Implications: The results provide crucial implications for researchers, investors, policy makers and managers. The study provides potential leverage points for those responsible for shaping the disclosure and transparency because of it insights on when OAD impacts EQ.</p> <p>Originality/value: This study offers a novel resource-based perspective to explain how Omani firms achieve higher sustainable and value relevance earnings by investing in OA. It also provides new evidence about how an ambidextrous firm improves the sustainable and value relevance earnings.</p> <p>Doi: https://doi.org/10.26668/businessreview/2023.v8i5.1393</p>
<p>Keywords:</p> <p>Organizational Ambidexterity Disclosure; Organizational Ambidexterity; Earnings Quality; Persistence; Value Relevance; Oman.</p> <div data-bbox="172 1120 478 1366" style="text-align: center;">  </div>	

DIVULGAÇÃO DE ATIVIDADES DE AMBIDEXTERIDADE ORGANIZACIONAL E QUALIDADE DE RESULTADOS EM OMAN

RESUMO

Objetivo: Este estudo examina a associação entre divulgação de ambidestria organizacional (OAD) e qualidade de ganhos (EQ) em termos de persistência de ganhos (PER) e relevância de valor (VR).

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Estrutura teórica: A divulgação de ambidestria organizacional (OAD) é um tipo de divulgação prospectiva (FLD) que inclui todas as informações sobre atividades de exploração e exploração. Na contabilidade, o estudo está interessado em como (OAD) afeta a qualidade dos lucros da empresa.

Desenho/metodologia/abordagem: Este estudo usa os dados secundários de empresas industriais e de serviços não financeiras listadas no Mercado de Valores Mobiliários de Muscat (MSX) em Omã por um período de 5 anos de 2017 a 2021. O estudo usa regressões de mínimos quadrados generalizados (GLS) e mínimos quadrados gerais viáveis (FGLS) para testar as hipóteses e encontrar os resultados.

Resultados: Os resultados do GLS e os resultados robustos do FGLS mostram que o OAD tem um efeito positivo e significativo na persistência de ganhos (PER) e relevância de valor (VR) e o coeficiente de VR é mais forte que o coeficiente de PER, indicando a importância de OAD sobre a qualidade do lucro como nova evidência na área de contabilidade.

Implicações de pesquisa: Os resultados fornecem implicações cruciais para pesquisadores, investidores, formuladores de políticas e gerentes. O estudo fornece pontos de alavancagem potenciais para os responsáveis por moldar a divulgação e a transparência por causa de seus insights sobre quando o OAD afeta o EQ.

Originalidade/valor: este estudo oferece uma nova perspectiva baseada em recursos para explicar como as empresas de Omã obtêm ganhos sustentáveis e de relevância de valor mais altos investindo em OA. Também fornece novas evidências sobre como uma empresa ambidestra melhora os ganhos sustentáveis e de relevância de valor.

Palavras-chave: Revelação da Ambidestria Organizacional, Ambidestria Organizacional, Qualidade do Lucro, Persistência, Relevância de valor, Omã.

DIVULGACIÓN DE ACTIVIDADES DE AMBIDESTREZA ORGANIZACIONAL Y CALIDAD DE LAS GANANCIAS EN OMÁN

RESUMEN

Propósito: Este estudio examina la asociación entre la divulgación de ambidestreza organizacional (OAD) y la calidad de las ganancias (EQ) en términos de persistencia de las ganancias (PER) y relevancia del valor (VR).

Marco teórico: La divulgación de ambidestreza organizacional (OAD) es un tipo de divulgación prospectiva (FLD) que incluye toda la información sobre las actividades de exploración y explotación. En contabilidad, el estudio está interesado en cómo (OAD) afecta la calidad de las ganancias de la empresa.

Diseño/metodología/enfoque: este estudio utiliza datos secundarios de empresas industriales y de servicios no financieras que cotizan en el Mercado de Valores de Muscat (MSX) en Omán durante un período de 5 años, de 2017 a 2021. El estudio utiliza regresiones de mínimos cuadrados generalizados (GLS) y mínimos cuadrados generales factibles (FGLS) para probar las hipótesis y encontrar los resultados.

Hallazgos: Los resultados del GLS y los sólidos resultados del FGLS muestran que OAD tiene un efecto positivo y significativo en la persistencia de ganancias (PER) y la relevancia del valor (VR) y el coeficiente de VR es más fuerte que el coeficiente de PER, lo que indica la importancia de OAD sobre la calidad de los resultados como nueva evidencia en el área contable.

Implicaciones de la investigación: los resultados proporcionan implicaciones cruciales para los investigadores, los inversores, los responsables de la formulación de políticas y los administradores. El estudio proporciona puntos de influencia potenciales para los responsables de dar forma a la divulgación y la transparencia debido a sus conocimientos sobre cuándo OAD afecta EQ.

Originalidad/valor: este estudio ofrece una perspectiva novedosa basada en recursos para explicar cómo las empresas omaníes logran mayores ganancias sostenibles y de relevancia de valor al invertir en OA. También proporciona nueva evidencia sobre cómo una empresa ambidestra mejora las ganancias sostenibles y de relevancia de valor.

Palabras clave: Revelación de Ambidestreza Organizacional, Ambidestreza Organizacional, Calidad de las Ganancias, Persistencia, Relevancia del Valor, Omán.

INTRODUCTION

Organizational ambidexterity (OA) is a new area of discussion in various fields. Fu et al. (2016) defined OA as the ability of organizations to simultaneously explore and exploit their resources to meet the business requirements and adapt to future environmental changes. Similar to other fields, OA is also a new issue in organization management. O'Reilly and Tushman (2008) argued that firms are developing products and services or creating new products and services need to overcome complexity and the high speed of environmental change. Hence, OA implies that exploration and exploitation need to move concurrently. As industrial and service firms face high levels of competition, they need to have the ability to acquire, develop, and/or upgrade capabilities dynamically. This requires for proper adaptation, integration and reconfiguration of the firm strategy, as well as internal and external skills and resources coinciding with environmental changes.

Meta reviews of the existing literature (e.g. Clauss et al., 2021; Fu et al., 2016; Gianzina-Kassotaki, 2017; Luger et al., 2018) pointed out that firms which apply the concept of OA mainly focus on exploration and exploitation activities. Those interested with OA need to consider a dual structure (exploration and exploitation) as its core to be successful in the long term. Here, exploration is related to finding new market opportunities, identifying the needs of customers or creating new demand by expecting potential desires (O'Cass et al., 2014). Meanwhile, exploitation is related to continuous improvement of the existing products and services. Firms pursue exploitation activities to respond to market needs with minor modifications of existing processes, routines, products, services and technologies (Clauss et al., 2021).

The concept of OA has increasingly become the field of research for many scholars. It has remained a key field of interest for management scholars especially evident in how prior studies examined the association between OA and firm performance (Fu et al., 2016; Peng et al., 2019), competitive advantage (Clauss et al., 2021), innovation performance (Popadić et al., 2015), financial managers' characteristics (Weigel et al., 2022) and strategic capabilities (Abazeed, 2020). Kassotaki (2022) pointed out that studies on OA have increased since the 1990s and identified two important conclusions: there is less clarity on how organizations achieve ambidexterity and there remains no significant effort to systematically organize these findings and compile them into a comprehensive review of current knowledge.

This study examines the relationship between organizational ambidexterity disclosure (OAD) and earnings persistence (PER) and value relevance (VR). The study discusses the

relationship between (OAD) and (EQ) and how an ambidextrous firm improves (EQ) in terms of earnings persistence and value relevance. This study adds new conclusions by arguing that there is less clarity on how OA effects on earnings quality of the firm. In accounting, the study is interested in how organizational ambidexterity disclosure (or OAD) affects the firm's earnings quality. Generally, OAD is one type of forward-looking disclosure (FLD) which includes all information about exploration and exploitation activities. Khankahdani et al. (2021) posits that all information related to the future operating performance of the firm and all events and evolutions that a firm is expected to face are part of forward-looking information. Prior studies (e.g. Al Dulaimi and Kadhim, 2022; Al Lawati et al., 2021; Beretta and Bozzolan, 2008; Charumathi and Ramesh, 2015; Dey et al., 2020; Kılıç and Kuzey, 2018; Nwaigwe et al., 2022) likewise affirm that FLD is an important factor which enhances the transparency and relevance of disclosure. These studies examined various types of FLDs such as management forecasts and analysis and sustainability disclosure. For example, Al Dulaimi and Kadhim, 2022 find that the firms can improve the level of transparency in disclosure by disclosing all information related to their activities. One the one hand, although most existing studies examined the effect of FLD, there remains very limited evidence about the impact of exploration and exploitation activities as a type of FLD. On the other hand, most prior studies examined the effect of FLD on financial performance as an accounting measure. We know scant about the relationship between exploration and exploitation activities disclosure (as type of FLD) and earnings quality. Hence, this study tries to fill this gap by examining the association between OAD and earnings quality (EQ) in terms of earnings persistence (PER) and value relevance (VR) in Oman.

The study makes several contributions to the literature. Firstly, it shows that OAD can be discussed in accounting literatures by finding the relationship between OAD and EQ. Secondly, it contributes to the theoretical development of ambidexterity by examining the impact of exploration and exploitation activities disclosure on earnings quality. Most studies around OA and accounting used accounting data as performance indicators such as return on assets, return on equity and firm value. Only few studies discussed the relationship between OA and EQ. Thirdly, we contribute to the practical development of OAD by using a new approach to measure this concept. As far as the researchers note, most studies used either questionnaire (Koryak et al., 2018; Mutisya et al., 2020; Peng et al., 2019) or surveys developed by some other pioneering studies such as He and Wong (2004), Gibson and Birkinshaw (2004), Cao et al. (2009) as cited by Popadić et al. (2015) and Luo et al. (2017). This study uses a new

measure for OAD that is data collected from the management reports about the future plans of the firm. Following the management reports, firms might have a future plan to create new products and services or develop the existing ones. The study uses a dummy variable to measure OAD by giving 1 if the firm has such a plan and 0 if the firm has otherwise.

In the following section, we review the literature and develop the study's hypotheses. The methodology section provides details on the sample, data collection and measures. Then, we present the empirical findings and conclude with a discussion of the results, implications, and avenues for further research.

LITERATURE REVIEW

Organizational Ambidexterity Disclosure (OAD)

Brix (2019) pointed out that OA is described in terms of two contradictory and seemingly incompatible processes of exploration and exploitation which happen in organizations. Clauss et al. (2021) and Raisch et al. (2009) refer to OA as a firm's capability to exploit current business operations with increasingly high levels of efficiency (i.e. exploitation) while simultaneously seeking new opportunities and radical innovations (i.e. exploration). Lis et al. (2018) depict OA in terms of paradoxes. Ambidextrous organizations are able to manage organizational paradoxes and simultaneously achieve divergent or even conflicting goals, such as short-term survival and long-term growth, incremental and radical innovation, or competition and cooperation.

OA has two types of activities: exploration and exploitation. Exploration refers to search, risk taking, experimentation and innovation, while exploitation has to do with refinement, efficiency, implementation, and execution (Gianzina-Kassotaki, 2017). Exploration enables firms to adapt new inventions, technologies, and knowledge (Christofi et al., 2021). Soares et al., (2018) pointed out that exploitation activities are those that seek to implement, fill and encourage the process of change in search of constant improvement, such as qualitative changes in an existing product, improvement in an industry process and opening of a new market to sell existing products. Specifically, exploitation is about enhancing operational efficiency, increasing productivity, control, risk avoidance and ensuring certainty. Meanwhile, exploration is about new searches, risk taking, variation, new discoveries, and innovation (March, 1991; O'Reilly & Tushman, 2008).

OA is discussed in management and organization in relation to topics such as competitive advantage (Preda, 2014), leadership (Bell and Hofmeyr, 2021), environmental

dynamic (Tamayo-Torres et al., 2017), ambidextrous sustainability (Maine et al., 2022), innovation (Alamayreh et al., 2019), entrepreneurial Orientation (Tuan, 2016) and corporate social performance (Hahn et al., 2016). In accounting, OA is discussed only in relation to performance. Peng et al. (2019) found a positive association between OA and financial performance. Fu et al. (2016) also found a positive relationship between OA and financial performance in terms of revenue growth rate. Ito (2022) examined OA and firm performance in terms of average sales growth rate and found a positive relationship between them. As far as the researchers know, the association between OA and accounting measures is limited to the financial performance and no other topics are discussed. This study tries to extend this discussion on OA in the accounting field by examining the association between OA and EQ. More specifically, this study examines the association between OA disclosure and EQ.

Generally, OAD is a type of FLD which is crucial for the functioning of capital markets. Its benefits include reducing the information asymmetry (Al Lawati and Hussainey, 2020; Al Lawati et al., 2021), risk and cost of capital (Bravo, 2016), improve information disclosure and enhance transparency (Buerthey and Pae, 2021). Khankahdani et al. (2021) found that future financial and non-financial information are among the important FLD from the manager perspective. FLD is a kind of information disclosure classified as part of discretionary disclosure and is greatly influenced by different motivations of managers. This is because firms present their future plans, projects, opportunities, risks, business strategies, and forthcoming forecasts which give users of financial statements a clear picture about the evaluation of the firm's future. Accordingly, it is evident that the information about exploration and exploitation activities (OA) is included in the definition of FLD. Following the discussion above, the exploitation activities include all information about operational efficiency, productivity, control, risk avoidance and ensuring certainty. Meanwhile, exploration activities include all information about new search, risk taking, variation, new discoveries, and innovation.

Earnings Quality (EQ)

EQ is a very important factor in the decision-making models of stakeholders. Farichah (2017) and Menicucci (2020) support this perspective as they define EQ in the frame of a specific decision model which is related to different financial statement users. Prior studies linked EQ and characteristics of useful financial information. Penman and Zhang (2002) described the former as a measure for future earnings in relation to prediction of future earnings. Leal et al. (2017) posit that EQ provides valuable information for stakeholders and reduces

uncertainties in the capital markets. Irwandi and Pamungkas (2020) consider EQ as one of the determinants of financial reporting quality to provide useful information for the decision-making process.

The main issue with EQ is finding appropriate measurements for it. Prior studies (e.g. An, 2019; Francis et al., 2004; Lyimo, 2014; Perotti and Wagenhofer, 2014; Vo and Chu, 2019) suggest various proxies to measure EQ including persistence, value relevance, income smoothing, conservatism, accrual quality and loss recognition timeliness. For the purpose of this study, we selected persistence as a proxy of EQ because persistence is related to profit sustainability and stands for the ability of current reported earnings to predict itself in future periods, which is one of the main objectives of OA.

EQ and Persistence

Earnings persistence attribute usually stands for the ability of current reported earnings to predict itself in future periods (Šodan, 2015). Persistent earnings are earnings that reflect the sustainability of earnings (sustainable earnings) in the future that is determined by accrual components and their cash flows (Farichah, 2017). Persistence is an EQ proxy used to evaluate whether the quality of earnings is high or low. Sustainable earnings persistence is stated as earnings that have high quality. Otherwise, unusual earnings are stated as earnings that have poor quality (Penman and Zhang, 2002). More persistent earnings are more sustainable, and higher quality and more informative in the stock market. Conversely, if earnings are less persistent, become less informative, more transitory and less quality (An, 2017).

The criterion used to interpret EQ is the slope-coefficient β in the regression model of persistence because it is closest to highly persistent earnings, while the value close to zero indicates highly unsustainable earnings.

EQ and Value Relevance

Value relevance (VR) has become a crucial attribute of accounting information quality for users of financial statements. According to Al-Shattarat (2021), VR represents the assessment of the connection between capital market values and accounting information. VR has greater value if it affects the decisions of decision-makers. However, most of the definitions of VR belong to the idea presented by Francis and Schipper (1999) who affirm that the value relevance of accounting information is the ability of accounting numbers to summarize the financial performance of a firm, thereby determining its share prices. The investors and other

users of financial statements need to test VR to calculate whether an accounting value presents a significant relationship with a market's prices (Black and Nakao, 2017).

In general, a high VR indicates a high EQ. Two approaches are then used to measure VR: first, by using book value, earnings and cash flow, which is called Ohlson's (1995) approach, and second, by using the Earnings Response Coefficient (ERC). The first approach focuses on the relationship between earnings, where cash flow and book value of shares are the most important information because of their effects on stock prices. The second suggests that accounting information is relevant when investor responsiveness to earnings is high (Dechow et al., 2010).

Organizational Ambidexterity Disclosure and Persistence

Most existing studies have found positive association between OA and firm performance (e.g. Fu et al., 2016; Ito, 2022; Peng et al., 2019). Fu et al., (2016) pointed out that ambidextrous firms are more capable of exploiting existing resources and proactively explore new. Despite that the firm has many goals from OA but one of the most important is to achieve and sustain high level of profit as the profitability will make the firm more adaptable to the changes in the environment. Similarly, Peng et al. (2019) identified that exploration and exploitation activities improve the operational efficiency in terms of profitability, productivity, and market share. When firms invest in exploration and exploitation activities, they would achieve high and continuous profits because these activities represent continuous sources of profits.

Cho et al. (2019) pointed out that activities of exploration enable firms to realize ongoing market growth, respond to local customers and increase the speed of satisfying market needs. Peng et al. (2019) demonstrated that exploitation activities help the firms to seek and capture market opportunities through the provision of appropriate target products to facilitate customer retention, sales growth, and profitability. Prange and Verdier (2011) argued that firms seek the exploitation activities for organizational survival, earnings survival in the short-term and for organizational development in the long-term.

The issue of continuous and sustainable earnings is seemingly presented in the association between OA and financial performance. Continuous and sustainable earnings follow the idea of earnings persistence as a proxy of EQ. We believe that EQ in terms of persistence is a good indicator to measure the activities of OA, and assess the relation between exploration, exploitation and OAD. Firstly, both exploration and exploitation activities improve

the firm's ability to generate and sustain the profit as exploitation processes are enhancing the productivity while exploration processes are seeking new knowledge and adding it to the existing one to introduce new products and services to satisfy the demand of new markets (López-Sánchez and Santos-Vijande., 2022). Secondly, as OA is positively associated with innovation, the firm expects more profit and earnings from innovative products and services, indicating that OA is able to attain sustainable earnings (Yang et al., 2020). Thirdly, it is pivotal for investors and other stakeholders to measure both the magnitude and the quality of earnings and ensure that these earnings are sustainable and persistent. Mirzajani and Heidarpour (2018) assert that the investor depends on persistent earnings in building the equity valuation models as more sustainable profit will lead to better inputs for such models. Therefore, the following hypothesis is forwarded:

H1: OAD is positively associated with earnings quality in terms of persistence.

Organizational Ambidexterity Disclosure and Value Relevance

VR is examined in relation to earnings management (Nelwan et al., 2020), foreign investments (An, 2019), excess returns (Lastra et al., 2017; Perotti & Wagnehofer, 2014), corporate social responsibility (Aureli et al., 2020) and IFRS (Kouki, 2018). Most existing studies find VR as an important factor in determining the significant information affects the decisions of the users of financial statements.

Our study provides new evidence about the value relevance of OA for the exploration and exploitation activities of Omani firms. The linkage between OA and VR can be seen as future information or FLD. OA is a long-term strategy as the desired goals from investments in OA activities may only be attained in the medium and long-term horizons (Longoni & Cagliano, 2016) and needs more value relevance information. Hence, investors need more transparent, reliable and relevant information to evaluate their investments. Theoretically, when firms invest in the exploration and exploitation activities, the information about the activities of OA should be disclosed to the users of financial statements. This type of disclosure is one of the FLDs which improve the firm's transparency, reputation and image.

Prior studies examined the importance of VR in relation to the future information or FLD. These studies mainly conclude that VR is a (positively or negatively) sensitive factor related to the information contents. Utami et al. (2020) find a relationship between FLD and VR and point out that FLD further decreases information asymmetry. Accordingly, share prices are incrementally higher when firms make greater FLD. Al Lawati and Hussainey (2020)

pointed out that FLD is very important value-relevance information for investors to improve the investment decisions. Hussainey and Mouselli (2010) likewise point out that FLD improves investors' ability to better forecast future earnings change. They confirm that FLD reports incentivize investors through usefulness of corporate narrative reporting, implying the high disclosure quality of information. Athanasakou and Hussainey (2014) find that FLD has higher credibility value as the investor reliance on it increases with the quality of earnings reported in the audited financial. Abu-Musa et al. (2021) find that FLD is value relevant about the performance of Egyptian firms. Utami and Wahyuni (2018) find that FLD has a significant effect on the value of the Indonesian firms. More specifically, Kılıç and Kuzey (2018) also find that the qualitative FLD has more VR than the quantitative disclosure. Nwaigwe et al. (2022) find an association between FLD in terms of sustainability information and market value in Nigeria.

Accordingly, FLD improves the predictive value of financial information, which adds value to the prediction model used by investors through reducing uncertainty in future earnings. Therefore, the following hypothesis is set as follows:

H2: OAD is positively related to value relevance.

MATERIAL AND METHODOLOGY

Sample Data Collection

The sample herein consists of listed non-financial (industrial and services) firms on the Muscat Securities Market (MSX). It used secondary data which were collected from the capital market and firms' websites from 2017–2021 and analyzed all the management reports for the firms in the sample to extract the exploration and exploitation activities during the period of the study. Table 1 shows the 107 total firms in this study and around 30 banking and financial institutions were excluded due to both different rules and regulations used by these institutions. 4 non-financial industrial and services firms with missing data for some variables were also excluded. Ultimately, the final sample of the study includes 365 firm-year observations.

Table 1. Sample Distribution

	OMN
Total Listed Firms (1)	107
Financial firms (2)	30
Non- Financial firms (industrial and services) 3 (1-2)	77
Firms with missing data (4)	4
Number of firms in sample 5 (3-4)	73
Number of observations 5*(5 years)	365

Source: Muscat Securities Market (MSX).

Models Specifications

This study constructs the following models for measuring EQ (PER) and EQ (VR) in Oman:

EQ (PER) Model:

Following Perotti & Wagnehofer (2014) and (Farichah, 2017), the slope-coefficient β is used to measure the persistence as expressed in the following equation:

$$EQ(PER)it = a + \beta Earningsit - 1 + \varepsilon it \quad (1)$$

Where:

i =firm

t =year

α = Constant

β = Beta

Earningsit = net income before extraordinary items in the current year

Earningsit-1 = earnings before extraordinary items in the previous year

εit = the residuals

The criterion that used in this study to decide about EQ(PER) is: When the value of β is close to one, EQ is high; close to zero, low EQ.

On the other side, the model that used in this study to examine the association between OA and EQ(PER) is:

$$EQ(PER)it = a + \beta 1 OADit + \beta 2 Sit + \beta 3 Rit + \beta 4 AGit + \beta 5 ROA + \varepsilon it \quad (2)$$

Where:

OAD= Organizational Ambidexterity Disclosure

EQ(PER)= Persistence

S= Size of the firm

R= The leverage (Risk)

AG= The age of the firm

ROA= Return on Assets

EQ (VR) Model:

Following Ali & Hwang (2000), the proxy used in this study is the association between earnings, book value and stock price or Ohlson's (1995) model. The explanatory power of R² of earnings and book value of equity for stock returns is the measure of VR, which is used as in the following equation:

$$P_{i,t} = \alpha + \beta_1 BV_{i,t} + \beta_2 EPS_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where:

- i = firm
- t = year
- α = Constant
- β = Beta
- P_{i,t} = the stock price at the end of the year
- BV_{i,t} = the book value of the stock at the end of the year
- EPS_{i,t} = the earnings per share at the end of the year
- $\varepsilon_{i,t}$ = the residuals

On the other side, the model that used in this study to examine the association between OAD and EQ (VR) is:

$$EQ(VR)_{it} = a + \beta_1 OAD_{it} + \beta_2 S_{it} + \beta_3 R_{it} + \beta_4 AG_{it} + \beta_5 ROA_{it} + \varepsilon_{it} \quad (4)$$

Where:

EQ(VR) = Value Relevance

The study uses STATA 16 to analyze the data. The study uses many statistical tests to conclude the results of the model. The study uses mean and standard deviation as descriptive statistics, normality tests (Skewness/Kurtosis) to check the normality of the data and whether the data are normally distributed or not. Also, the study uses Breusch-Pagan/Cook-Weisberg test for heteroskedasticity problem and Durbin-Watson test to find the autocorrelation problem. In addition, the study uses feasible general least squares (FGLS) regression to increase robustness and solve the problems of diagnostic tests. Hausman test (fixed effect and random effect) is used to overcome the problem of heterogeneity in the panel data. In the study, several statistical models or tests were conducted to improve the results and overcome the problems in some of these statistical models.

Variables of the Study

Three types of variables are utilized in this study. The first is the group of two dependent variables, namely EQ which is measured by earnings persistence and value relevance. The second is the independent variable which is OAD. A dummy variable was used to measure OAD. We analyzed the management report for all non-financial firms (industrial and services) for the period of the study (2017-2021) to extract the OAD. In the management report, the management of the firm refers to the future plan about developing the existing products, services, strategies or processes (exploitation). Moreover, the future plan might be extended to create new products, new services, new strategies, new technologies or new processes (exploration). Therefore, the dummy variable (1, 0) was used to measure OAD— 1 if the firm has such plans and 0 if otherwise.

The third variable is the group of control variables. Following other prior studies (Farichah, 2017; Maine et al., 2022; Popadić et al., 2015; Hameedi et al., 2022) the study includes variables such as firm size (*S*), the risk or the leverage (*R*) and age of the firm (*AGE*) to the analysis. The firm size is measured by using the algorithm of total assets. The leverage is measured by the proportion of total liabilities to total assets while the age of the firm is measured by using the number of years since the establishment of the firm.

RESULTS

Descriptive Statistics

Table 2 lists the descriptive statistics, e.g. means (M), standard deviations (SD)

Table 2. Descriptive Statistics

Variables	N	Min	Max	M	SD	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	SD	Statistic	SD
OAD	365	0.0	2.0	.616	0.8057	0.805	0.128	-0.987	0.255
ROA	365	-0.33	0.27	0.0375	0.07880	-0.715	0.128	2.188	0.255
S	360	0.51	3.25	1.6507	0.57788	0.348	0.129	-0.405	0.256
R	365	0.07	1.79	0.5209	0.42415	1.548	0.128	2.090	0.255
AGE	365	0.30	1.64	1.2322	0.22472	-0.419	0.128	0.221	0.255
EQ(PER)	365	0.31	0.32	0.3196	0.00199	-4.643	0.128	19.661	0.255
EQ(VR)	360	-1.30	2.22	0.2380	0.45479	-0.924	0.129	2.194	0.255

Source: Prepared by the authors (2023)

Table 2 shows that the mean of OAD is 61.6%, indicating that Omani firms have a good indicator of OA. The mean of ROA is quite low because of COVID-19 during the period of study. The mean of firm size is also high, indicating that Omani firms have enough assets to work for exploration and exploitation activities in the future. The mean of risk is at 52.09%,

which is high indicating that the assets are funded by using more liabilities which make the firm under the pressure of the creditors. The mean of age of the firms indicates that the majority of these have enough experience to work for exploration and exploitation activities in the future. The mean of *EQPER* is at 0.3196, indicating that Omani firms are more persistent and sustainable. The R^2 of *EQVR* is 0.537, indicating that the explanatory powers of accounting data of book values and earnings per share jointly explain 53.7% of the share price variation in Oman.

Autocorrelation and Correlation

The Durbin Watson statistic was used to test for autocorrelation in the residuals from regression analysis. Table 3 shows the value of DW before and after transformation. Table 3 shows that no autocorrelation issue exists in the data of Omani firms, nor bears any effect on the results derived from regression.

Table 3. DW Statistics

DW statistics	Value
Durbin-Watson statistic (original)	1.162134
Durbin-Watson statistic (transformed)	1.902179

Source: Prepared by the authors (2023)

Correlation Matrix

Table 4 shows the correlation matrix between the variables in the models. Table 4 shows that the correlation between *EQVR* and *OAD* is positive and significant at 0.01, while the association between *OAD* and *EQPER* is insignificant. The associations between *EQPER*, *EQVR* and control variables are different. *ROA* has positive and significant association with *EQVR* at 0.05. Risk has insignificant with *EQVR*, while it has negative and significant association with *EQPER*. The other control variables (*AGE* and *S*) have no significant association with *EQVR* and *EQPER*. Following Table 4, the result indicates that no multicollinearity problem occurs for all the study variables because the value does not exceed 0.8.

Table 4. Correlation Matrix

	OAD	ROA	S	AGE	R	EQPER	EQVR
OAD	1.000						
ROA	0.067	1.000					
S	0.072	0.139**	1.000				
AGE	0.137**	0.001	0.119*	1.000			
R	0.002	-0.031	-0.120*	-0.083	1.000		
EQPER	0.090	-0.010	0.060	0.036	-0.104*	1.000	
EQVR	0.116**	0.120*	0.032	0.086	-0.102	-0.053	1.000

Source: Prepared by the authors (2023)

Regression Analysis

To start with regression analysis, some primary tests such as Heteroskedasticity and Hausman tests were conducted herein.

Heteroskedasticity

The heteroscedasticity test was conducted to assess efficiency of the regression model among the errors in the independent variable. Table 5 below shows the results of the heteroscedasticity test.

Table 5. Heteroskedasticity Results

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity		
Ho: Constant variance		
Variables: fitted values of BIG		
	chi2(1)	Prob > chi2
EQPER	75.17	0.0000
EQVR	914.43	0.0000

Source: Prepared by the authors (2023)

Results show the *Prob > chi2* is less than 0.05, indicating that the problem of heteroscedasticity is existing, and therefore, it indicates inappropriateness in using the OLS (Ordinary Least Square) regression.

Hausman Test

A Hausman test was conducted to choose between fixed effect model and random effect model. The results indicate that fixed effect should be used for Model 1 (EQPER) as $chi2(4) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 24.77$ and $Prob>chi2 = 0.0001$ and random effect for Model 2 (EQVR) as $chi2 (5) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 6.21$ and $Prob>chi2 = 0.2865$. Accordingly, the random effect is conducted and the results are presented in table 6.

Table 6. Results of Generalized Least Square (GLS) Fixed Effect (FE) and Eandom Effect (RE)

Variables	Model 1: EQPER (FE)			Model2: EQVR (RE)		
	Coef.	T	P> t	Coef.	T	P> t
OAD	0.001	2.07	0.040	1.419	2.10	0.036
ROA	0.002	0.71	0.479	14.631	2.11	0.036
R	0.005	3.78	0.000	-2.474	-1.88	0.061
S	-0.001	-1.40	0.163	-0.051	-0.05	0.957
Age	0.003	1.89	0.060	2.979	1.21	0.226
Constant	0.316	166.85	0.000	3.871	2.55	0.011
R-square	0.2073			0.2324		
F-Value (Wald chi2(4))	4.323			9.01		
Sig.	0.0003			0.0000		

Source: Prepared by the authors (2023)

Following Table 6, both models are significant at 0.01 ($p < 0.01$) (0.0003) and (0.0000), respectively. There is no big gap between the two models for R-Square as it is 20.73% for model 1 and 23.24% for model 2. However, the R^2 for Model 2 (*EQVR*) is greater than R^2 for model 1 indicating that OA and control variable for (*EQVR*) has more explanatory power than (*EQPER*). The GLS regression shows that OAD is positively associated with both *EQPER* (0.04) and *EQVR* (0.036) indicating that if the firm increases its OA degree, the EQ improves in terms of sustainable earning and value relevance. Control variables have different results in both models for *ROA* and Risk. *ROA* is positively associated with *EQVR* but has insignificant relationship with *EQPER*. Conversely, Risk is positively associated with *EQPER* but has negative relationship with *EQVR*. The other two control variables (S and Age) have no significant on EQ for both models.

Feasible Generalized Least Square (FGLS)

As the Heteroskedasticity, cross-sectional and serial correlations are important problems in the error terms of panel regression models, FGLS was used to increase robustness and solve these problems. FGLS measures the coefficients and covariance matrix for a multiple linear regression model under the presence of non-spherical innovations and an unknown covariance matrix. FGLS results, as presented in Table 7, show that OAD has positive and significant effect on EQ (*PER*) and EQ (*VR*) at 0.05. Results show that there are no heteroskedasticity and no autocorrelation in the model. Size of the firm, risk and age shows insignificant effect on EQ (*PER*) and EQ (*VR*) for both models, while *ROA* has positive and significant effect only on EQ (*VR*) but not for (*EQPER*).

Table 7. Results of FGLS for EQ (PER) and EQ(VR)

Variables	Model 1: EQPER			Model2: EQVR		
	Coef.	T	P> t	Coef.	T	P> t
OAD	0.0003	1.70	0.048	1.393	2.10	0.035
ROA	0.0005	-0.36	0.719	14.445	2.13	0.033
R	0.0005	-1.98	0.089	-2.463	-1.91	0.056
S	0.0002	0.83	0.408	0.301	0.32	0.752
Age	0.0002	0.30	0.765	3.163	1.29	0.197
Constant	0.319	489.9	0.000	3.871	2.56	0.010
Wald chi2(4)	7.25			13.54		
Sig.	0.0299			0.0036		
Panels	Homoscedastic					
Correlation	no autocorrelation					

Source: Prepared by the authors (2023)

DISCUSSION

Empirical results reveal positive effects of exploration and exploitation activities on the firm's earnings sustainability and value relevance in Oman. There are some reasons behind these results. Firstly, Oman is a new market for investments and there are a lot of opportunities that needed to be exploited in. Currently, 60% of Omani firms have future plans in terms of exploration and exploitation activities in order to increase their income. However, Omani firms perse to increase the OAD by improving the exploration and exploitation activities to attract more investments. Secondly, prior studies (e.g., Al-Najjar and Abed, 2014; Bravo, 2016; Dey et al., 2020) pointed out that forward-looking information is very important to improve the level of disclosure.

In Oman, Al Lawati and Hussainey (2020) find that the information about plans of the firms reduces information asymmetry between firms and their stakeholders. As exploration and exploitation activities are one of the forward-looking information, it is expected that these activities will improve the disclosure including the earnings quality. Thirdly, the Omani government has started to reform the accounting disclosure to increase the transparency, reliability and relevance of financial information. For example, the capital market authority in Oman (the authority who is responsible for monitoring the accounting and auditing profession in Oman) issued many circulars, decisions and regulations to improve the level of disclosure and transparency.

(<https://cma.gov.om/Home/DecisionsCirculars/DecisionsCirculars?typeFilter=1>).

Therefore, Omani firms must increase the disclosure, transparency, reliability and relevance of information of their future exploration and exploitation activities and increase the level of OAD. Fourthly, Oman has 'Vision 2040' which include economic, environmental and social

dimensions to improve the quality of life. All Omani listed firms should take a role in achieving this vision by adopting their visions to build a future plan in terms of exploration activities, exploitation activities or both (Al Lawati, 2022). Finally, Claudia and Mihaela (2019) and Tamayo-Torres et al. (2017) pointed out that all firms which are working in a dynamic business environment and complexity can use OAD to provide themselves with the essential tools needed to achieve strategic competitiveness. Omani firms have a lot of potentials to move into internationalization and such business environment will face high level of complexity, uncertainty and instability. Hence, they can use OAD to meet the requirements of this dynamic business environment. Results herein coincide with the prior studies (Fu et al., 2016; Luo et al., 2017; Ito, 2022) who found that OA has positive effect on organizational variables such as financial performance, institutional performance and innovational performance.

CONCLUSION

This study examines the relationship between organizational ambidexterity disclosure and earning quality. It extends the existing literature that considers the conditions organizational ambidexterity contributes to other accounting variables rather than financial performance (i.e. earnings quality). Consequently, this study offers a novel resource-based perspective to explain how these firms achieve higher sustainable and value relevance earnings by investing in OA. It also provides new evidence about the relationship between OAD and EQ and how an ambidextrous firm improves EQ in terms of sustainable and value relevance earnings.

Empirical results revealed positive effects of exploration and exploitation activities disclosure on EQ in terms of earnings persistence and value relevance earnings. GLS results show that for EQ (*PER*) and EQ (*VR*) are influenced by OAD indicating that more OAD enhances the sustainable and value relevance of earnings. The results are robust by using FGLS because OAD has a positive effect on both EQ (*PER*) and EQ (*VR*).

This study provides implications for researchers, policymakers, managers and investors. Firstly, the research area provides a potentially rich agenda for researchers which should include questions about how can OAD build, analyze and measure and what are the appropriate methods at firm level to measure OAD? Secondly, it provides potential leverage points for those responsible for shaping the disclosure and transparency because of it insights on when OAD impacts EQ. The challenge for those spearheading disclosure and transparency in firms is to make the disclosure full, transparent and informative to provide reliable and relevant information to users of financial statements. Within this framework, it is pivotal for managers to

understand the importance leadoff leading their organizations toward OAD since it affects their sustainability earnings and value relevance of earnings. According to Serra et al. (2021), the new disclosure (such as OAD) encourages managers to adopt the best disclosure policies to show their good performance. Therefore, managers should give more attention to both OA and OAD and find ways to make OAD attractive for the investors.

With OAD being beneficial to the firms' EQ, managers should therefore assess their capacities to give added attention to the exploration and exploitation activities and provide reliable and relevant disclosure. Thirdly, the study shows that improvements in EQ occur when firms opt for a higher level of OAD. Therefore, policymakers should pay regard to organizing OAD in a way that provides reliable and relevant information about the exploration and exploitation activities of the firm. We believe that if the OAD is organized formally through responsible authorities, it will be more reliable and relevant for decision making purposes. Fourthly, Oman is a new market for the investors in general and for the foreign investors in specific. Therefore, investors are concerned with EQ to evaluate their investments and improve their decision models through reliable and relevant information about the firm's plans. Investors always interest and appreciate firms who voluntarily provide disclosures with integrated reporting insight such as forward-looking disclosure.

Several limitations are present herein. Firstly, the use of dummy variable (0, 1) to measure OAD encourages future studies to use new measures of OAD which are acceptable by the literature. Secondly, it uses only two proxies of EQ: earnings persistence and value relevance earnings. Future studies should focus on using other proxies of EQ to develop robust theoretical perspective and empirical evidence about the relationship between EQ and OAD. Thirdly, the focus of this study is on OAD and EQ of the firms in Oman. Other developing countries may experience challenges with generalization because contextual differences exist in a variety of economic, legal, and institutional environments. However, much research remains to be done and could therefore prove fruitful for future studies.

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