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FACTORS INFLUENCING VOLUNTARY SUSTAINABILITY REPORTING FOR OIL AND GAS COMPANIES IN TANZANIA

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ABSTRACT
This article examines factors influencing voluntary sustainability reporting for the oil and gas sector in Tanzania. The sector was considered due to its potentiality for economic development. The population of the study was oil and gas companies operating in upstream, midstream, or downstream. Factor analysis was applied to group the factors and obtain variables which were regressed to test their significance in determining voluntary sustainability reporting. The study used non-probabilistic sampling and data was collected through a survey. It was revealed that perceived benefits, NGOs and the media significantly influence voluntary sustainability reporting, while top management support, governmental regulations and professional involvement do not. From the findings of the study, it is recommended that advocates of voluntary sustainability reporting should capitalise on creating awareness on perceived benefits, NGOs and the media. It is also recommended that more attention should be dedicated to making organisations themselves perceive the benefits of sustainable reporting rather than paying a lot of attention to governmental regulations, governmental support, professional involvement and management support factors.

***Key words*:** *Voluntary Sustainability Reporting (VSR), Sustainability Reporting (SR), Financial Reporting*

INTRODUCTION
The oil and gas industry is of great importance because it leads to energy production that drives other industries; therefore, it is a critical concern for many economies in the world (World Economic Forum, 2012; Harderer, 2013). As per the Local Content Policy of Tanzania (2014), the country has recently attracted attention of leading oil and gas companies in the world after the discovery of significant amounts of oil and gas of about 46.5 trillion cubic feet. About 8 trillion cubic feet are from onshore fields of Songo Songo, Mnazi Bay, Mkuranga, Kiliwani North and Ntorya while the remaining resources were discovered offshore in deep waters. On the other hand, activities of oil and gas companies tend to negatively impact the environment and society directly due to emissions and land reformation (Kharaka & Dorsey, 2005; Krupnick & Kopp, 2014). This acts as a threat to sustainability, and accounting as a field of study has an important role to play with regard to how to measure and report sustainable development (ACCA, 2010). Accounting is traditionally defined by the American Institute of Certified Public Accountants (AICPA) as involving recording, analysing and classifying transactions of a financial nature which are then reported to the owners and investors. Major financial reports produced by accountants include income statements, statements of financial position, cash flow statements and explanation of financial

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policies and notes (IFRS1, 2011). However, sustainability related reporting has attracted more awareness recently (Kolk, 2004). Companies now need to be able to undertake sustainable reporting (SR) in a comparable and verifiable way (United Nations, 2004).

The history of SR can be traced back to 1990s whereby companies started supplementing their financial accounting with accounting on their environmental, social and other 'non-financial' performance (Hohnen, 2012). While financial reporting (FR) emphasises issues that have financial significance to shareholders and investors, SR is future-oriented and incorporates non-financial and any other information that is material to stakeholders (INTOSAI, 2013). SR is an organisational report that gives a detailed and complex analysis of past and present impact of organisation's activities on ecological systems resources, habitats and societies (Gray, 2002) and can be reported in a separate vehicle or integrated with other traditional accounting reports (Hahn & Kühnen, 2013). Despite being mandatory in some jurisdictions, several SR guidelines such as GRI's, G3 guidelines, the GHG protocol and the ISO standards are undertaken out of company's own free will (EY & GRI, 2013). This is to say that standards themselves are not an issue, but rather the need of information by stakeholders. On this ground, voluntary sustainability reporting (VSR) means going beyond what is required by law and regulation and disclosing non-financial information which explains the impact of organisations' operations to the society. As opposed to mandatory reporting, we believe that if taken out of free will, SR is likely to be more informative.

According to Economist Intelligence Unit (2010), organisations themselves understand the benefits of SR, which can add value in a number of ways, including increased resource efficiency, higher levels of employee retention and reduced cost of capital (ACCA, 2014). This implies that perceived benefit is one of the drivers of SR and the process of SR is aimed at improving and internalising organisations' commitment to the development of present society without compromising needs of the future generation in a way that can be demonstrated to stakeholders. Apart from the identified benefits, factors such as top management attitude and organisational structure have also been linked with VSR as pointed out by studies like Thoradeniya *et al.* (2012), Krongkaew-arreya & Setthasakko (2013). According to these researchers, SR is determined by initiation from top management based on their attitude which is considered an important starting point for producing sustainability reports. To encourage VSR, governments as regulators should consider relevant incentives. Studies also reveal the influence of the state towards VSR as the state is assumed to enable development of voluntary regulations and provision of incentives (Gibson, 1999; MacKendrick, 2005). There is also increasing pressure placed on organisations by stakeholders including NGOs, the media and accounting professional boards who want organisations to measure, manage and report the impact of their activities on the society (ACCA, 2014). One way of achieving this objective is through SR.

The Stakeholders Theory by Freeman (1984) argues that management should create value not only to shareholders but also to stakeholders. Through this theory, stakeholders such as the media, government and NGOs are seen as influencers of VSR. While Adams (2002) agrees that the media has an influence on VSR, scholars like Branco and Rodrigues (2008) as well as Chalu and Mshana (2014) found that the media does not play a significant role in determining VSR. Apart from the observed controversy, most studies on SR are based on sectors other than oil and gas, and they have been based on developed economies (Belal, 2001; Adams, 2002; Thoradeniya *et al.*, 2012; Durak, 2013; Owen, 2013; Krongkaew-arreya & Setthasakko, 2013). Given the theoretical gap and the criticality of the oil and gas sector for economic development and the fact that Tanzania is a developing country, it became interesting to examine factors influencing VSR for oil and gas companies in Tanzania. Specifically this study addressed three issues: the influence of organisational factors towards voluntary sustainability reporting by oil and gas; the influence of governmental factors towards voluntary sustainability reporting; and the influence of environmental factors towards voluntary sustainability reporting by oil and gas companies in Tanzania.

LITERATURE

Overview of sustainability reporting

According to GRI (2000), sustainability reporting is defined as the practice of measuring, disclosing and being accountable to both internal and external stakeholders for organisational performance towards the goal of sustainable development. The concept of sustainable development is considered as development that meets the needs of the present without compromising the ability of future generations to meet their own needs as explained by a report published by the World Commission on Environment and Development in 1987. The commission states: "Sustainability reporting is a broad term considered synonymous with others used to describe reporting on economic, environmental and social impacts (e.g. triple bottom line, corporate responsibility reporting, etc.)" (p.3). This is to say, SR goes beyond numbers and profitability by addressing environmental and societal issues (Clarkson *et al*., 2011). SR can be carried through a separate vehicle or integrated with corporate reporting (Dilling, 2009). Integrated reporting is a new approach to corporate reporting that informs the stakeholders on how the corporation creates short, medium- and long-term value which is done through incorporating both financial and non-financial data by bringing them together in a meaningful, orderly, logical and systematic way (ACCA, 2014). Sustainability reporting practices are largely undertaken out of company's free will and only few governments such as France and Sweden have introduced some items of mandatory SR and this type of reporting is mostly undertaken by large companies in developed economies (ACCA, 2014). According to Perrini and Tencati (2006), organisations need to measure and control their own behaviour in order to assess whether or not they are responding to stakeholder concerns in an effective way and to communicate the results achieved. This is done for the purpose of broadening and integrating the traditional financial approaches to corporate performance measurement, while taking into consideration the needs of stakeholders.

According to Ioannou and Serafeim (2011), it has been found out that voluntary reporting increases perceived social responsibility of business leaders, investment in employee training and improves monitoring effectiveness of corporate bodies and hence organisations prefer disclosing sustainability information out of their own free will. That is to say VSR is the practice of measuring, disclosing and being accountable to stakeholders for organisation's social, economic and environmental impacts in the society out of company's free will. As opposed to VSR, mandatory SR in this case refers to disclosing organisation's social economic and environmental information as it is compulsory (Bartels *et al*., 2016).

Theoretical perspective

The theoretical basis of this study is on two theories, namely, Stakeholders Theory and Institutional Theory. According to Freeman (1984), the former wants management to consider business ethics that incorporates morals and values of stakeholders. The identified stakeholders group includes employees, financiers, customers and community. The argument put forward by this theory is that corporations shall be managed in the interests of its stakeholders. This view is against managerial capitalism that wants management to pursue interests of shareholders. Perrini and Tencati (2006) suggest that a company should not only focus on fulfilling interests of the shareholders but also rather focus on a wider group of stakeholders. Through this theory, the media, government and NGOs being part of stakeholders, have a major role to play in influencing VSR. In line with the theory, organisations seek to address the various challenges and queries that could be presented by the society. This tells one that a firm is induced to undertake SR mainly to maintain its relationship with its stakeholders. It is further argued that by fulfilling the interests of stakeholders, the organisation will realise benefits like retaining more employees and winning more customers.

Institutional Theory, on the other hand, states that organisations are rooted in a comprehensive system of political, financial, educational, cultural and economic institutions that exert institutional pressure on such institutions to behave in a certain manner (Leicht & Jenkins, 2010). The theory explains how norms, routines, rules and schemes automatically become authoritative guidelines for social behaviour. This is to say for an organisation to survive within a particular society, it has to abide to the prevailing systems in that particular social setting. The theory provides a suitable theoretical perspective to analyse the role of organisational factors such as perceived benefits and top management support in influencing VSR (Pérez, 2014). This means, should there be clear lines of authority and a department that is responsible for SR, a company is likely to uptake VSR practices. It further explains how professional involvement may become an influencing factor towards VSR.

Prior literature and study hypotheses

Organisational factors and VSR

From an organisational point of view, the discussions on SR are based on perceived benefits as firms are focused on the idea that if sustainability concerns are ignored, this may damage the reputation and brand value (Lungu *et al*. 2011). The way an organisation has been structured also matters as this will determine who is responsible for SR (Mink, 2012). Using an in-depth interview with six large companies practising sustainability reporting in Srilanka, Krongkaew-arreya and Setthasakko (2013) found out that there are three main drivers for companies advanced in producing sustainability reports; these include initiation from company's top management, supporting organisational design and attitudes towards social and environmental disclosures. Their study considered manufacturing companies from different industries including automobiles, electronics, energy, chemicals, paper and steel as contrasted to this one that focuses on oil and gas companies.

Furthermore, having carried out a survey to 173 companies by administering questionnaires and analysing the results through statistical techniques, Thoradeniya *et al*. (2012) found out that a manager's psychological variables such as attitude, subjective norm and perceived behavioural control, have an influence on his/her intention to engage in SR practices. SR is particularly important in enhancing corporate reputation. It might be considered as a signal of improved social and environmental conduct and hence reputation in those fields because disclosure influences the external perception of reputation. In his study titled *Internal organisational factors influencing corporate social responsibility and ethical reporting*, Adams (2002) mentioned perceived benefits of ethical reporting as one of the factors that enhance organisational committed towards SR. He argues that it is because companies see clear benefits to them in terms of corporate image that they voluntarily include SR in their reporting system.

The perceived benefits mentioned by Adam include attracting and retaining most talented people, inclusion in ethical investment fund, reduced criticisms and minimised risks such as consumer boycotts. This implies that at company level, discussions of SR are focused on the idea that environmental or social concerns may affect the ability to expand company's operations or might damage its reputation and impair its brand value. As identified earlier on, for the purposes of this study, organisational factors included organisation structure, attitudes of the manager and perceived benefits. This study argues that company's chair, board of directors and parent company are in a position to set organisational direction, strategy and policy and approve budget allocation plans. Initiation from them, consequently, is the most important starting point of collecting, analysing and producing social and environmental performance reports (Krongkaew-arreya & Setthasakko, 2013). Furthermore, the study argues that companies need to have good attitude towards green disclosure, perceive internal and external benefits and believe bad news reporting can also bring usefulness. Corporate transparency and creditability are also argued to attract more environmental-concerned customers that lead to higher revenue, and gain a license to operate (Adams, 2002). The argument here is that the organisational factors which were taken to consist of top management support and perceived benefits, matter in determining VSR. These factors were operationalised using the Likert scale to probe their influence towards VSR under the hypothesis below.

H_1: There is a positive relationship between organisational factors and voluntary sustainability reporting by oil and gas companies in Tanzania.

Governmental factors and VSR

Since 1980s, voluntary reporting on social and environmental issues has been inscribed in the Stakeholders Theory stating that allocation of company's resources is aimed at satisfying stakeholders (BenoitMoreau & Parguel, 2011). The government as a key stakeholder has a major role of ensuring welfare of the society; it also plays a big role in influencing the reporting of sustainability issues and this can be through the provision of incentives and awards which act as stimuli for the uptake of SR, as pointed out by Wensen *et al.* (2011). According to a report by Wensen *et al.* (2011), several countries give awards for the best presenters of sustainability reports. Some awards mentioned include the Austrian Sustainability Reporting Awards (ASRA), Belgium Award for the Best Sustainability Report, Finnish Competition and the Swedish Award for the Best Sustainability Report.

As a measure to enhance VSR, a state is said to enable development of voluntary regulations and provision of incentives (Gibson, 1999; MacKendrick, 2005). In the Tanzanian context, there are some standards and regulations requiring some form of SR. Tanzania's Financial Reporting Standard No 1, (TFRS 1, 2010), Director's Report advocates for some form of SR where by companies are required to report on environmental matters, employees' welfare, social and community issues. Moreover, the Environmental Management Act 2004 (EMA, 2004) regulates environmental issues in Tanzania. The Act does not mandate SR but requires government authorities to ensure that industries located within respective areas manage their environmental waste. Despite these regulations, VSR is intended to have persuasive rather than mandatory force addressed to key stakeholders.

Apart from an award offered by the National Board of Accountants and Auditors (NBAA) Tanzania, for the best annual financial report, which has been discussed under norms in this study, there are no other awards presented by the government to encourage SR. This study however sought to probe the role of incentives and voluntary regulations in determining VSR for the oil and gas industry in Tanzania as it has been the case in other countries such as Australia and Belgium. Through incentives, companies will be induced to include sustainability information in their reports in order to enjoy the benefits from incentives. Moreover, this study argues that if there were guiding government regulations, more companies would be motivated to report on sustainability matters voluntarily, as there would be a benchmark. It is argued that the existence of the Environmental Management Act 2004 (EMA, 2004) that does not mandate SR but requires government authorities to ensure that industries located within their areas do operate sustainably, has an influence on VSR by oil and gas companies in Tanzania. For the purposes of this study, governmental factors were taken to include government support and government regulations. The hypothesis below was developed for these factors.

H_2: There is a positive relationship between governmental factors and voluntary sustainability reporting by oil and gas companies in Tanzania.

Environmental factors and VSR

NGOs such as GRI have continued producing one of the world's most widely used standards for SR guidelines also known as Corporate Social Responsibility (CSR) reporting guidelines since 1997 (EY & GRI, 2013). NGOs' dialogues in most instances influence SR in order to change the perception of external stakeholders as well as norms such as accounting professional boards which are said to have an influence towards VSR by organisations (ACCA, 2010; EY & GRI, 2013). Having interviewed three British and four Germany pharmaceutical companies, Adams (2002) noted that stakeholders' involvement including the media and NGOs, were mentioned as determinants of SR. Pérez *et al.* (2007) noted that the inclusion of an environmental accounting system which is part of SR requires support from organisational level through accounting bodies to governmental agencies and NGOs.

However, there is a contradictory view regarding the role of the media in influencing SR. A study by Branco and Rodrigues (2008), in Portugal, found that there is a positive relationship between SR and the media while a study by Chalu and Mshana (2014) in Tanzania found that the media plays a weak role in influencing inclusion of environmental accounting in organisations' accounting system. They also found out that accounting bodies, organisational factors and NGOs have an influence on environmental reporting which is part of SR. Their study was based on regression analysis after collecting data from twelve manufacturing firms operating in Tanzania. Norms (professional bodies), the media and NGOs have been categorised as environmental factors in this study. It is argued that trainings, seminars and pronouncements by professional boards will bring about awareness and competence to accountants and hence induce them to report on social and environmental matters. Furthermore, pressure, accusations to management and airing of views by NGOs and other stakeholders through the media are believed to have positive impact towards VSR. The three environmental factors were examined to determine their contribution towards sustainability reporting. The study therefore considered professional involvement, media and NGOs as environmental factors surrounding an organisation, and which exert a certain degree of influence on SR in an indirect way. The hypothesis below was developed.

***H_3**: There is a positive relationship between environmental factors and voluntary sustainability reporting by oil and gas companies in Tanzania.*

Table 1: Operationalisation of variables

Variable	Definitions	Measurement (Indicators)	Reference source
Organisational factors			
Top management support	Assistance and resources provided by top management in order to influence VSR	(1) Designating a specific department responsible for SR (2) Having clear lines of authority (3) Feelings (4) Follow up (5) Training (6) Views of top management top management of the company (7) Specifying officials from other departments (8) Influence from parent company (9) Provision of resources by top management (10) Inclusion of VSR in strategic planning	Mink (2012), Krongkaew-arreya & Setthasakko (2013), Thoradeniya *et al.* (2012)
Perceived benefits	Attracting financial and non-financial benefits to the organisation	(1) Access to funds by company (2) The company gaining community support (3) Grants company a license to operate in the society hence more customers	Adams (2002)
Governmental factors			
Governmental support	Provision of awards, which acts as stimulus for uptake of VSR	(1) Recognition by the government (2) Support by government officials (3) Awards by the government	Wensen *et al.* (2011)
Government regulations	Rules, laws and regulations by both local and central authority	(1) Standards issued by the government (2) Tax reliefs by government (3) Pronouncements by government (4) Government directives	Gibson (1999), MacKendrick (2005).
Environmental factors			
Professional Involvement	Extent to which professional boards have an influence on VSR	(1) Formal training by professional boards (2) Seminars conducted (3) Standard issued by professional boards	Chalu & Mshana, (2014)
NGOs involvement	The extent to which NGOs participate in supporting VSR issues	(1) Support from NGOs (2) Pressure from NGOs (3) Report formats issued by NGOs (4) Forums organised by NGOs (5) NGOs airing their views about organisation impact on environment	Chalu & Mshana (2014)

Media involvement	Degree to which communication outlets participate in influencing VSR	(1) Forums conducted through media (2) Act of stakeholders airing their view through media	Branco & Rodrigues (2008)

METHODOLOGY

This study was quantitative in nature; it sought to find feelings, ideas and explanations regarding the influencing factors for VSR by oil and gas companies in Tanzania. The study used a survey approach to collect data and a descriptive design was adopted preferably because it makes enough provision for accurate profile of persons, events, or situations Saunders *et al*., 2004). The targeted population was employees of all oil and gas companies operating in upstream, midstream, or downstream sectors. As the study focused on employees working with oil and gas companies operating in Tanzania, the survey method was believed to be appropriate for data collection. Questionnaires were administered by employees working in finance, accounting or any other relevant department of several oil and gas companies in the upstream, midstream and downstream to solicit their views on factors influencing VSR. The study population involved employees in the accounting, finance or similar departments that deal with SR of oil and gas companies in Tanzania. The study was conducted in Dar es Salaam due to the fact that all oil and gas companies operating in Tanzania have their main offices in Dar es Salaam. The study was conducted in the following companies: Dalbit Petroleum Ltd., Halliburton, Heritage Oil TZ Ltd., Maurel et Prom Tanzania, Mogas Tanzania Ltd., Ndovu Resources TZ Ltd., Ophir TZ, Oryx Energies, Pan African Energy, Puma Energy Ltd., Schlumberger, Songas Co Ltd., Statoil Tanzania AS, Total Tanzania Ltd., and Wentworth Gas Ltd.

A non-probabilistic sampling procedure was used, and specifically, the judgmental or purposive technique because it was believed that the technique would make it possible to obtain quality data. The technique was used as respondents were expected to be staff from the accounting department or similar department that performs SR. A total of 83 responses were collected from 15 companies. Primary data was collected by using questionnaires administered to respondents. Questionnaires were issued to employees of relevant departments dealing with SR in the selected oil and gas companies. Close-ended questions were used to measure the importance of various factors that appear to have an influence on SR. The Likert scale of 1-5 was used to rate these factors. Data collected was analysed through the regression method. Regression analysis was used to determine the relationship between a dependent variable and one or more independent variables. The conceptual model was tested to examine the said relationship. Independent variables in this study included organisational factors, governmental factors and environmental factors. The variables were tested to see whether they related to VSR. Descriptive statistics was therefore used to analyse the data, much as the existing situation was explored. Following the analysis, the output was presented both in tables and prose.

To enhance validity, the instrument was developed form variables of the study which originated from specific questions and research objectives. Constructs measuring each variable were reviewed for their clarity and factor analysis was conducted through SPSS to select relevant factors, as presented in the Table 2. Cronbach's alpha was used to measure internal consistence, that is how a set of items was closely related as a group. Alpha value may range between negative infinity and positive one, however only a positive value of alpha makes sense (Winner, 2009). This study considered a score of 0.7 or higher as reliable, as it has been recommended by scholars using a psychometric instrument.

Table 2: Factor analysis

Factor	Items loading the factor	Loading	Label given
F1	Designating a specific department to be responsible for sustainability issues influences VSR	.820	Top Managemen t support
	Top management of the company do influence VSR	.774	
	Having clear lines of authority with respect to social reporting in an organisation do influence VSR	.771	
	Having clear lines of authority with respect to environmental reporting in an organisation do influence VSR	.725	
	Feelings of top management have an influence towards VSR	.702	
	Training conducted by top management has an influence towards VSR	.654	
	Follow-up made by top managers has an influence towards VSR	.635	
	Views of top managers has an influence towards VSR	.632	
	Provision of resources by top management to support VSR influences its reporting	.618	
	Implementing recommendations on VSR by top management influences VSR	.600	
	Inclusion of VSR in strategic plan by top management has an influence towards its reporting	.597	
	VSR positively distinguishes the company from competitors	.559	
	Influence from parent company determines VSR	.542	
	Specifying officials from other departments who will assist in collecting sustainability information influences VSR	.525	
F2	Formal training by professional boards do influence VSR	.839	Professional involvement
	Seminars conducted by the accounting standard board influences VSR	.794	
	Accounting standards issued by accounting standard boards do influence VSR	.768	
	Workshop conducted by the accounting standard board influences VSR	.764	
	VSR results to retention of best employees by the company	.514	
	VSR reduces penalties to the organisation	.513	
F3	Support from NGOs does influence VSR	.876	NGOs Involvement
	Pressure from NGOs influences VSR	.854	
	Report formats issued by NGO’s do influence VSR	.827	
	Forums organised by NGO’s do influence VSR	.703	
	NGOs airing their views about organisation impact on environment and society influences VSR	.648	
F4	Forums conducted through media do influence environmental reporting	.821	Media Involvement
	The act of stakeholders airing their view through media influences VSR	.820	
	Media has an influence towards sustainability reporting	.737	

	Forums conducted through media do influence social reporting	.653	
	VSR attracts more environmental-concerned customers that leads to higher revenue	.544	
F5	Recognition by the government influence VSR by an organisation	.792	Government support
	Support by government officials influences VSR	.748	
	Awards by the government influence VSR by an organisation	.691	
F6	Standards issued by the government influence VSR	.772	Government regulations
	Tax relief by government influences VSR	.643	
	Pronouncements by government influence VSR	.600	
	Government directives influence VSR by an organisation	.515	
F7	VSR provides access to investment fund by the company	.787	Perceived benefits
	VSR results into the company gaining community support	.654	
	VSR grants company a license to operate in the society	.544	
	Government campaigns on sustainability matters influences VSR	.502	

RESULTS

Profile of the respondents

Employees from fifteen oil and gas companies placed within accounting, finance or any other department dealing with SR were surveyed. Responses were received from employees of the following companies: Dalbit Petroleum Ltd., Halliburton, Heritage Oil TZ Ltd., Maurel et Prom Tanzania, Mogas Tanzania Ltd., Ndovu Resources TZ Ltd., Ophir TZ, Oryx Energies, Pan African Energy, Puma Energy Ltd., Schlumberger, Songas Co Ltd., Statoil Tanzania AS, Total Tanzania Ltd. and Wentworth Gas Ltd. Respondents were categorised according to the nature of ownership as presented in Table 3. As evident from Table 3, the results on the nature of ownership show that out of 83 responses, 64 are from privately-owned companies and this is equivalent to (77.1%). Nine responses (10.8%) were from government-owned companies while 10 (12%) were from both government and private companies. Respondents were also grouped depending on how long their companies had been operating in Tanzania. The grouping includes respondents from companies which had operated within two years, more than two years but less than four years, more than four years but less than six years and over six years. The results as presented on Table 3 show that about 56 respondents (approximately 67%) were from privately-owned companies that had operated for more than 6 years. This indicates that (67%) of responses were gathered from better informed sources. The importance of public companies and the ones that were both public and private which had operated for less than six years was not being undermined since 27 (33%) responses were received from them.

Table 3: Profile of respondents

Characteristic	Response category	F(n=83)	%
Ownership of the companies	Government	9	10.84
	Private	64	77.11
	Both Government and Private	10	12.05
Time of operation in Tanzania	< 2 years	2	2.41
	2 and 6 years	18	21.68
	6 years <	63	75.90
Types of activity	Upstream	23	27.71
	Midstream	7	8.43
	Downstream	39	46.99
	Upstream and Downstream	5	6.02
	All three types	9	10.84

Source: Field data

Descriptive statistics

Descriptive statistics for variables

As per the Likert scale used in the study, a score of 1 indicates strongly agree, 2 indicates agree, 3 indicates neutral, 4 indicates disagree while 5 indicates strongly disagree. This means that values closer to 1 indicate that the respondent strongly agrees on the influence of the factor towards VSR, and values closer to 5 indicate that the respondent strongly disagrees on the influence of the factor towards VSR. Descriptive statistics for top management supports VSR were the mean was 2.016 and standard deviation was 0.685. This shows that, on average, respondents agree on the influence of top management support towards VSR and values in the data are not far from the mean due to a smaller standard deviation. The minimum and the maximum value top management support were 1.143 and 4.929 respectively. Regarding perceived benefits, a mean of 2.257 and a standard deviation of 0.765 were obtained. This shows that, on average, respondents agree that the governmental has influence towards VSR and values in the data are not far from the mean due to a smaller standard deviation.

The minimum and maximum values for governmental support were 1.000 and 4.000 respectively. The study obtained a mean of 2.064 and a standard deviation of 0.752 for governmental support. This indicates that, on average, accountants agree on the influence of environmental factors towards VSR and values in the data are not far from the mean due to a smaller standard deviation. The minimum and maximum values for governmental regulations were 1.00 and 4.000 respectively. On average, respondents agreed that governmental regulations influence VSR by their companies at a mean of 2.093 and a standard deviation of 0.592. The small value of standard deviation shows that responses do not significantly deviate from the mean.

The minimum and maximum values for professional involvement were 1.000 and 5.000 respectively. The study obtained a mean of 2.149 and a standard deviation of 0.676 for professional involvement. This shows that, on average, respondents agree on the influence of professional support towards VSR and values in the data are not far from the mean due to a smaller standard deviation. Descriptive statistics for media involvement had a mean of 2.101

and a standard deviation of 0.685. This shows that, on average, respondents agree on the influence of top management support towards VSR and values in the data are not far from the mean due to a smaller standard deviation. The minimum and maximum values regarding top management support were 1.000 and 4.200 respectively. As far as NGOs involvement was concerned, a mean of 2.446 and a standard deviation of 0.813 were obtained showing that the involvement of NGOs in supporting VSR is generally agreeable with observations not significantly deviating from the mean. The minimum and maximum values regarding top management support were 1.000 and 4.600 respectively.

Generally, the mean score for all factors indicates that oil and gas accountants agreed on the statement made about variables defining a particular factor. The results for all variables are presented in the Table 5.

For testing reliability, generally, Cronbach's Alpha is used as a measure of internal consistence of the tool and a reliability scale of at least 0.7 is considered as acceptable (Tavakol & Dennick, 2011). All variables measured were reliable with each component giving the level of reliability as shown in Table 4.

Table 4: Descriptive statistics and Cronbach's Alpha

Variables for the study	Valid N	Minimum	Maximum	Mean	Std. Deviation	Cronbach's Alpha (α)
Top management support	83	1.143	4.929	2.016	0.685	0.936
Perceived benefits	83	1.000	4.600	2.257	0.764	0.859
Governmental support	83	1.000	4.000	2.064	0.752	0.898
Governmental regulations	83	1.000	4.000	2.093	0.592	0.855
Professional involvement	83	1.000	5.000	2.149	0.676	0.835
Media involvement	83	1.000	4.200	2.101	0.685	0.789
NGOs involvement	83	1.000	4.600	2.446	0.813	0.729
VSR	83	1.000	4.000	2.142	0.707	0.904

Source: Field data

Smith (2005) explains validity as the degree to which a measure correlates with alternative measures of the construct in measuring what it claims to measure. As for Westen and Rosenthal (2003), validity can be measured through correlation analysis, and this was adopted in this study in which validity was calculated by measuring the correlation among construct variables for each construct of the study. The results show that all Pearson correlation was significant at an alpha level of 0.01. Validity was further fine-tuned through factor analysis as it was presented in the Table 2 earlier.

Table 5: Pearson correlation coefficients

Factors	PerceivedB	GovtReg	NGOInv	ProfInvol	MediaInv	GovtSup	TMSupport
PerceivedB	1.000	-.020	-.100	-.345	-.054	-.176	-.169
GovtReg	-.020	1.000	-.200	.133	-.065	-.249	-.295

NGOInv	-.100	-.200	1.000	-.042	-.122	-.263	.022
ProfInvol	-.345	.133	-.042	1.000	-.160	.108	-.332
MediaInv	-.054	-.065	-.122	-.160	1.000	-.240	-.223
GovtSupp	-.176	-.249	-.263	.108	-.240	1.000	-.075
TMSupport	-.169	-.295	.022	-.332	-.223	-.075	1.000

a. Dependent Variable: VSR

Key:

PerceivedB	Perceived benefits
GovtReg	Governmental regulations
NGOInv	NGOs involvement
ProfInvol	Professional involvement
MediaInv	Media involvement
GovtSupp	Governmental support
TMSupport	Top management support

Regression results

According to Baguley (2012), multicollinearity shows the correlation between two or more predictors in a regression model, and it does not reduce the predictive ability of the model. However, if strongly correlated, it may affect individual predictors. Two measures of multicollinearity for this study included tolerance and VIF. Tolerance is the proportion of unique information contributed by the predictor in the study. As tolerance value approaches zero, it indicates a collinearity problem as this implies the predictor does not add unique information. As shown in Table 6 below, the highest tolerance value is 0.669 for NGOs involvement while the least is 0.498 for top management support. The rest of the variables had a collinearity tolerance value ranging between 0.669 and 0.498 implying that all factors bring unique information to the minimum of 49.8% of the total information. The Variance Inflation Factor (VIF) shows the extent to which sample size of the study needs to be increased to reduce the impact of multicollinearity. According to Rogerson (2001), researchers normally prefer lower VIF values; he recommended a maximum VIF value of 5. The study obtained a maximum VIF of 2.008 for top management support which was below the maximum value and the regression analysis was run.

The R-value gives the correlation between observed values of independent variable and predicted values of dependent variables. For this study, the correlation coefficient is equal to 0.624 indicating that, on average, there is a co-movement among tested variables. The value of R-Squared is the coefficient of determination and it normally gives the indication of the strength of the relationship between dependent and independent variables. It measures the extent to which total variation in dependent variables is explained by the model. As shown in Table 6 below, R-Squared value of 0.39 was obtained. This means that 39% of the variance in VSR is explained by the model. According to Itaoka (2012), the size of R-Squared does not matter; he pointed out that in social sciences, an R-Squared value of 9% is considered fair. The model of this study indicated that VSR is a variable that depends on organisational factors, governmental factors and environmental factors. This shows that the model explains only 39% of variation in VSR implying that 61% of the variations in VSR are not explained by the model.

The adjusted R-Square is a modification of R-Square that takes into account the number of predictors. It measures proportion of variation in the dependent variable of a regression model that contains different numbers of predictors. It usually takes any value that is less than 1 and it is always less than or equal to R-square. From the data collected, the value of adjusted R-Square is 0.333, which is slightly lower than R-Square by 5.76%. This shows that the dependent variable is fully measured and its variation thereof is well explained by the model. The study obtained a standardised error of estimate of 0.577 as shown in Table 6 below hence indicating that the sample is a very good representative of the entire population because the smallest value of standard error is 0, and the smaller the error the more representative is the sample. The Durbin Watson scale is a test statistic used to show mathematical representation of the degree of similarities for values separated from each other by a given time interval. The scale ranges from 0 to 4 and a Durbin Watson scale of 2 indicates that there is no autocorrelation; a scale of less than 2 indicates there is positive correlation while the one that is greater than 2 indicates a negative autocorrelation. According to Kleiber and Kramer (2004), an ideal Durbin Watson scale should range from 2+/- 0.5. The study obtained a scale of 1.813 which was considered good and allowed banking on the model. Due to the fact that 1.813 is lower than 2, it indicates a positive correlation between variables; this is to say the variables move in the same direction.

Study results further show that the model is significant at 0.000 with perceived benefits, NGOs involvement and media involvement being significant at the level of 0.070, 0.071 and 0.001 respectively. Top management support, professional involvement, government support and government regulations were not found to be significant in determining VSR, as presented in the Table 6 below:

Table 6: Regression results

Summary	
Multiple R	0.624
Coefficient of Determination (R^2)	0.390
Adjusted R^2	0.333
Standard Error of Estimate	0.577
Durbin-Watson	1.813

Analysis of Variance

	Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Regression	15.965	7	2.281	6.848	.000[b]
Residual	24.981	75	.333		
Total	40.946	82			

Variables entered into the Regression Model

	Regression coefficients	***Statistical significance***	***Correlations***	***Collinearity***

Variable entered	B	Std. Error	Beta	t	Sig.	Zero order	Partial	Part	Tolerance	VIF
(Constant)	.670	.300		2.235	.028					
TM Support	.198	.132	.192	1.501	.138	.434	.171	.135	.498	2.008
ProfInvol	-.176	.122	-.168	-1.439	.154	.232	-.164	-.130	.597	1.675
NGOInv	.176	.096	.202	1.833	.071	.404	.207	.165	.669	1.495
MediaInv	.411	.121	.398	3.379	.001	.543	.363	.305	.587	1.703
GovtSupp	-.079	.114	-.084	-.693	.491	.327	-.080	-.062	.557	1.794
GovtReg	-.063	.137	-.053	-.459	.648	.286	-.053	-.041	.615	1.626
PerceivedB	.201	.109	.217	1.839	.070	.418	.208	.166	.586	1.708

DISCUSSION AND CONCLUSION

On the two organisational factors, which included top management support and perceived benefits, the findings indicate that there is no significant relationship between top management support and VSR. Although descriptive statistics shows that on average respondents agree that top management plays a role on VSR, the predictive ability of top management support in influencing VSR is not significant. This implies that designating a department responsible for SR issues, having clear lines of authority as well as feelings by top management does not significantly influence VSR. These findings contradict the findings by Krongkaew-arreya and Setthasakko (2013) who did their research in Thailand and found out that initiation from company's top management influences VSR. As the surveyed companies operate in different sectors and in different countries, it is possible to have different findings. Looking further at the ownership structure, most of the surveyed companies are subsidiaries; hence, most of the key decisions are made by parent company's management, and such reports may be issued at parent level and not at subsidiary level.

The study found out that perceived benefits, as the other organisational factor, had significant influence on VSR. This is in line with a study by Adams (2002) who concluded that the extent to which a company perceives that there are benefits in reporting sustainability matters tend to influence the nature and the extent of VSR. It is also evident that most responses (77%) were received from private companies that normally operate in order to make profit, so to them perceived benefits is what matters.

With regard to governmental factors which include government support and government regulations, both were found not to have a significant influence over VSR. This is to say governmental awards, recognition, campaigns, workshops and support do play a significant role in influencing VSR. The findings of this study are not in line with findings by Gibson (1999) and MacKendrick (2005) who found out that voluntary regulations are likely to encourage voluntary environmental and social reporting. One reason could be that in Tanzania, there is no voluntary regulation by the government and the government does not have scheduled recognition and awards schemes with regards to VSR.

On the side of environmental factors, which include professional involvement, NGOs and media, it was found that professional involvement does not significantly influence VSR by oil and gas companies in Tanzania. This is against the findings by Chalu and Mshana (2014) who carried surveyed manufacturing firms in Tanzania and found out that professional bodies have an influence on VSR. Despite the sartorial gap, this study was mainly focusing on voluntary initiatives as opposed to any social or environmental report which can be mandatory. It was also revealed that NGOs involvement significantly influences VSR by oil and gas companies in Tanzania. This corroborates findings by Adams (2002) but conflicts with findings by Chalu and Mshana (2014) who claimed that NGOs do not influence the inclusion of environmental accounting which is part of VSR.

In line with studies by Adams (2002), Branco and Rodrigues (2008) concluded that the media influences VSR. This study also found that the media has a significant effect on VSR. This is to say through stakeholders airing their views via the media as well as forums conducted through the media and pressure exerted by the media, oil and gas companies are voluntarily induced to issue VSR hence support the Stakeholders Theory. It can be argued that the media plays a significant role to give the company a social licence to operate; for example, in order for oil and gas companies to gain acceptance particularly in developing countries where they face a lot of criticisms on impoverishing people, they become sensitive to publicity through the media.

The thrust of this study was to assess factors influencing VSR for the oil and gas sector in Tanzania. The study had three objectives. The first objective was to assess the influence of organisational factors towards VSR by oil and gas companies; while the second objective was to examine the influence of governmental factors towards VSR by oil and gas companies. The third objective was to establish the influence of environmental factors toward VSR by oil and gas companies. The study used a quantitative approach and adopted a positivist paradigm. It also used a non-probability sampling to collect primary data through interviews and questionnaires. Secondary data was obtained from books, journals, and newspapers. Moreover, the study used the Stakeholders Theory and the Institutional Theory. With regard to theoretical contribution, it has been observed that a particular group of stakeholders who can exert pressure to an organisation such as the media and NGOs enhances the predictability power of the Stakeholders Theory, with regard to VSR. From the findings of the study, it may be concluded that perceived benefits, NGOs involvement and media involvement have an influence on VSR while top management support, professional involvement, governmental support and governmental regulations do not have an influence on VSR.

Despite its relevance, this study had a number of limitations. First, the study focused on oil and gas companies that had been operating in Tanzania for at least ten years, disregarding any new companies which might not have stabilised. The study also focused on the influencing factors towards SR and less attention was paid towards the quality and content of the said reports. Secondly, the study targeted members from accounting, finance or any other department involved with reporting from oil and gas companies in Tanzania. During the survey, it was difficult to solicit responses from some respondents in some of the companies due to their tight schedules; this way, some opinions, feelings and perceptions of informed respondents might not have been captured. Using a larger sample might have been a more effective way of adding new insights to influencing factors on VSR by oil and gas companies in Tanzania. Lastly, there was restricted access to some of the oil and gas companies. Despite negotiating access from respective authorities, some few oil and gas companies were reluctant to allow the researcher to study their employees. As such, future studies may be extended in the same sector by ensuring a bigger sample, due to limitations identified earlier. Moreover, as the findings of this study oppose some researchers' hypotheses, it would be important to develop further understanding in this area. As a matter of emphasis, further research is required to investigate the influence of organisational structure and attitude of managers, governmental regulations and norms as the findings on these factors oppose the researcher's hypotheses.

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