DIPONEGORO JOURNAL OF ACCOUNTING ***Volume 10, Nomor 4, Tahun 2021, Halaman 1-7***
http://ejournal-s1.undip.ac.id/index.php/accounting ***ISSN (Online): 2337-3806***

EFFECTS OF ACCOUNTING TOOLS ON SOCIAL AND ENVIRONMENTAL ACCOUNTING

Tan Oscario Archie Kristandy, Frank Gruben[1]

Departemen Akuntansi Fakultas Ekonomika dan Bisnis Universitas Diponegoro
Jl. Prof. Soedharto SH Tembalang, Semarang 50239, Phone: +62 24 7648 6851

Academie Financiën, Economie & Management, Saxion University of Applied Sciences
Handelskade 75, 7417 DH Deventer, Phone: +31 88 019 3728

ABSTRACT

The purpose of this paper is to analyze and evaluate how True Value and Social Value methodologies affect the company's performance, which aims to measure in financial terms the value firms make or decrease for social and environmental reasons. True Value and Social Value methodology to scrutinise social and environmental externalities and their potential effect on future earnings the consequence that management action may result in more positive social and environmental impacts may easily become a by-product of risk management rather than an objective.

Keywords: True Value, Social Value, Social and Environmental, Accounting.

INTRODUCTION

Social and environmental concerns have been the main concern of every person in the world in recent years. The accounting world has also begun to transfer its focus by creating many social and environmental accounting instruments to solve these problems by using the triple bottom line concept for each and every method having its own characteristics and measurements. However, the fact that these instruments are still being created on an ongoing basis, plus the non-mandatory existence of the social and environmental impact report, has raised a range of concerns, such as what the primary purpose of these instruments is, who are the final recipients of the report and how successful it is to tackle the problems of the 20th century. It is therefore important to analyze and quantify how efficient the application of accounting tools is in the battle against social and environmental issues and how it affects businesses in terms of their financial and business processes.

There is no question that human activity is a major contributor to environmental degradation. The fact that greenhouse gas concentrations have grown by more than a third since the industrial revolution demonstrates human influence. As a result, it is up to us to raise our environmental consciousness and change our habits. The increased greenhouse effect, which has led global temperatures to rise, is a result of increased greenhouse gas emissions. These gases also pollute the air, land, and water. Pollution degrades the quality of food, perhaps resulting in hazardous chemicals being consumed. Human health is also jeopardized by poor air quality. Another example of how human activity affects the environment is deforestation. Raw resources such as food and medicine are provided by forests. Trees are also significant 'carbon sinks,' meaning they absorb carbon dioxide from the atmosphere during photosynthesis, which helps to balance out the amounts of carbon dioxide in the atmosphere. People are boosting the greenhouse effect by removing trees, which means global temperatures are rising. As a result, extreme weather events such as storms, droughts, and floods occur. Many species are at risk of extinction as a result of issues such as climate change because they are

[1] *Corresponding author: f.e.h.gruben@saxion.nl*

unable to adapt to the changing climatic conditions. Because all ecosystems are linked, the extinction of a seemingly insignificant species has far-reaching implications for civilization.

THEORITICAL FRAMEWORK

"Environmental problems" is a ubiquitous but vague concept, and by clarifying the nature of these problems and how they emerge from human use of the environment by employing some basic concepts from ecology (Groot, 2002). Air pollution is unfortunately the common cause of environmental degradation. Pollution introduces contaminants into the environment that can maim or even kill plant and animal species. Industry and automobiles are the primary and secondary contributors to air pollution worldwide (Faiz, Sinha, Walsh, & Varma, 1990). Microbe contamination of groundwater due to sewage outfalls and high concentration of nutrients in marine and coastal waters due to agricultural runoff are among the most serious threats (Temba, 2019). Every year 25 billion pounds of toxic pollutants are added to the environment by factories and mines. Additionally, 2.2 billion pounds per year of pesticides (eight pounds per citizen) are sprayed on our crops (Alavanja, 2010). Tropical forest constitutes seven percent of world land surface area, yet contains over 50% of all plant and animal species. Half of all tropical forests have been destroyed; by 2010, three quarters may be lost. Additionally, 20–50% of global wetlands have been destroyed (54% thus far in the US, with an additional 115,000 acres/year) (Tyagi, Garg, & Paudel, 2014).

Stakeholder Theory is a view of capitalism that stresses the interconnected relationships between a business and its customers, suppliers, employees, investors, communities and others who have a stake in the organization (Freeman, Harrison, Wicks, Parmar, & De Colle, 2010). The theory argues that a firm should create value for all stakeholders, not just shareholders. In brief, According to the Project Management Institute, stakeholders are "individuals and organizations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or successful project completion." First, from a stakeholder perspective, business can be understood as a set of relationships among groups that have a stake in the activities that make up the business (Freeman R. E., 2011). Disseminating sustainability reports that encompass economic, social, and environmental factors is one strategy for maintaining ties with corporate stakeholders. The publication of the sustainability report is anticipated to meet the needs of stakeholders, resulting in a harmonious connection between the firm and its stakeholders, allowing the organization to achieve long-term sustainability.

True Value KPMG

KPMG True Value is a tool that helps companies understand how the value they create and minimize for society affects the value they create for shareholders (KPMG, INTRODUCING KPMG TRUE VALUE, 2015). This experience gives decision-makers a new perspective on how to enhance results, educate policy, and expand control. One objective for research could be to investigate stakeholder engagement in the application of the methodology or with its findings (Schmidt & Falk, 2020). A brief review of producers reports on the True Value methodology reveal different positions on stakeholder engagement. In contrast, a report on NS Dutch railways by KPMG recognises quantifying the value NS creates for society is used as fact-based data for engagement with stakeholders presumably to provide an ex-post rationalisation of corporate determinations of impact and valuations. Given such apparent differences on stakeholder engagement, the extent to which this methodology finds a home in, for example, legitimacy theory or stakeholder theory offers a potential agenda for future research (Adams, 2008)

Social Value (SROI)

Social Return on Investment (SROI) is a framework for measuring and accounting for this much broader concept of value; it seeks to reduce inequality and environmental degradation and improve wellbeing by incorporating social, environmental and economic costs and benefits (Value, 2012). According to Social Value UK, there are two types of SROI: "*Evaluative, which is conducted retrospectively and based on actual outcomes that have already taken place [and] Forecast, which predicts how much social value will be created if the activities meet their intended outcomes.*" Several principles must be conducted when implementing Social Value: Involve Stakeholders, understand what changes, value the things that matter, only include what is material, don't over claim, be transparent, verify the result.

The Important of Accounting in Corporate Performance

Accounting is a vital tool for assessing the effectiveness of a company's operations. The role of accounting has become more crucial, especially today when the inadequacy in the natural resources and the problems of social issues increase for present and future generations (Makarenko & Plastun, 2017). There is a growing pressure on accounting and professional accountants to better integrate sustainability into corporations' decision-making system to direct their behaviors toward sustainable development. Sustainability implies consuming limited resources without jeopardizing the survival of future generations and, in parallel with this aim, efficient and productive utilization of the resources (Çalişkan, 2014). From the perspective of the community, accounting is part of broader social and political factors, and the information it provides serves for the depiction of the past and the present (Horvat & Korošec, 2015). Accounting and accountants may contribute to sustainability through the sustainability reporting and the accounting information that forms the decisions of the management.

The role of accounting in sustainability is beyond the internal processes mentioned above. Through its reporting function, accounting serves as an instrument for disclosing financial and non-financial information, such as social and environmental, in annual reports and other media (Maas & Vermeulen, 2020). In other words, when sustainability is taken as a view toward balancing the future and current generations with regard to social, economic and natural factors, accountants may play a role in the realization of this idea in companies, by contributing to internal processes through their ability for reporting, auditing and management, and by informing the stakeholders (Hohnen, 2007).

Company Externalities and Company Performance

Increased concerns of global warming and widespread income inequality have raised questions about the contributions of modern business organizations toward achieving sustainable economic growth and social development of the world (Nation, 2008). Organizations are now under increased pressure to meet the diverse needs and expectations of different stakeholders and justify their license to operate and earn profit. In response to the stakeholders' expectations, business organizations use sustainability reports, including information on economic, environmental and social activities to provide insights of their sustainability-related activities (Initiatives, 2016). The use of such sustainability reports helps organizations communicate effectively with stakeholders, improve corporate reputation and justify their legitimacy in society. Therefore, the importance of sustainability reporting (SR) is increasing overwhelmingly among managers and all other stakeholders (Pajares & Moneva, 2018). Sustainability reports are commonly prepared in accordance with the widely known reporting framework, the Global Reporting Initiative (GRI) guidelines. The GRI is one of the most widely acceptable and recognized sustainability-reporting systems in the world. It provides a set of common elements of SR and helps organizations present sustainability reports with better uniformity and comparability across different countries (Pope, 2020).

RESEARCH METHODOLOGY & ANALYSIS

NS is using the KPMG True Value analysis to identify and implement initiatives that will increase the value it creates for society while reducing its negative impacts. The project team from NS and KPMG with experience in corporate finance, sustainability, operations, and other disciplines made up the project team. This multidisciplinary approach was crucial in ensuring a high degree of data and information exchange across functions. The team worked together to complete the first phase of KPMG's True Value approach. This is done to identify and categorize the organization's tangible externalities as either positive or negative. Detrimental externalities have a negative impact on society, and positive externalities have a beneficial impact. The original outcome was a "long list" of externalities and concerns that stakeholders were concerned about. The Global Reporting Initiative (GRI) G4 materiality standards and the concepts of Integrated Reporting were then used to create a shortlist. The shortlist was then evaluated further to see if there was enough data and metrics to quantify these externalities in monetary terms. Using expert input and the finest available academic data sources, KPMG professionals assessed these externalities and assigned a financial value to them. The Netherlands Institute for Transport Policy Analysis, the United States Environmental Protection Agency (EPA), and the Netherlands Ministry of Infrastructure and the Environment all contributed data.

The value of the mobility provided by NS has been calculated at a minimum of €7 billion (US$7.8 billion). NS also needs to consider the negative effects of crowded or delayed trains and time spent waiting at stations and changing trains. Together, these negative effects have been calculated at a value of about €5 billion (US$5.6 billion). This means that, overall, NS creates a net positive value for society of €2 billion (US$2.2 billion) or more through mobility. NS therefore creates value for society by enabling its passengers to avoid car accidents. This positive value has been calculated at about €430 million (US$478 million) in 2014. However, some accidents and injuries do occur either on the trains or at stations and the negative value to society of these accidents was calculated at about €1 million (US$1.1 million) in 2014. The positive environmental value that NS created in 2014 has been quantified at €90 million (US$100 million). This is based on the amount of emissions and air pollution that were avoided when travelers chose to travel by NS rail services instead of by car. By contrast, NS created around €120 million (US$133 million) of negative environmental value. Around €70 million (US$78 million) of this negative value comes from NS's direct operations primarily through using fossil fuels for powering trains

To understand the social return ratio for DIAL House, it is important to outline how the financial value for outcomes was calculated and the steps taken to apply deductions. In an SROI evaluation, the “real” value of outcomes is determined by:

1. Gathering data from stakeholders to estimate the financial value.
2. Gathering data on deductions to only claim the value of what an organisation is responsible for creating.
3. Undertaking a sensitivity test to test assumptions about the relationship between various outcomes and social return ratio being calculated in an SROI analysis.

The SROI ratio is calculated using below formula:
SROI Value = Social Value Adjusted/Value of Inputs
€1,633,718.60/€283,986.80 = €5.75

- The results in a €5.75: $1 ratio. This means that this analysis estimates that for every €1 that invested in the DIAL a social value of €5.75 was created.
- The outcomes were valued at €1,349,731.80 with input costs of €283,986.80.

- Young Adults and Care Leavers experience 75% (€318,187) of the total social value.
- Service Providers experience 15% (€17,372.25) of the total social value.
- Families of young adults experience 6% (€26,667.90) of the total social value.
- Statutory Agencies and Local Authority experience 4% (€62,500) of the total social value.

CONCLUSIONS

It is frequently claimed in business that you can't manage what you don't measure. This is also true in terms of how your company influences society. In their efforts to support good practice, investors need to be able to identify genuine value for the communities served by the organizations they support. The organizations themselves need to have a means of finding out where they are generating value and where they need to improve. Companies are under growing pressure to demonstrate that they contribute positively to society while still creating money for shareholders. Concentrating just on the financials is no longer sufficient. In many industries and marketplaces today, an organization's good social effect can be the difference between gaining and losing a contract. So, measuring and managing those impacts is simply good business sense. In recent years, methodologies to measure an organization's impacts – both positive and negative – have become much more sophisticated (KPMG, A New Vision ofValue, 2014).

When applying the True Value and Social Value methodology to scrutinise social and environmental externalities and their potential effect on future earnings the consequence that management action may result in more positive social and environmental impacts may easily become a by-product of risk management rather than an objective. Given recognition of the megaforces of society and the environment, it is on core corporate values and moral reasoning as opposed to economic reasoning that research and practice should arguably centre. Accounting's involvement in sustainability is a reflection of its core duties and necessitates the acquisition of new skills. Accounting and accountants' basic tasks include reporting, administering, and auditing. Accounting is responsible for reporting not only financial but also social and environmental information in annual reports and informing stakeholders through these reports and other means of communication, thereby assisting in the determination, development, and operation of the mechanisms that make up the sustainability infrastructure.

The SROI model found that every €1.00 invested in DIAL House results in an SROI of approximately €5.75 (a social return of 575%). Overall, findings from this sensitivity analysis have found that the social return generated by DIAL House likely appears within a range between €4.81 to €5.82, which still demonstrates that the service offers value and a positive investment for its funders. This is based on a total investment of €1,633,718.60 and €283,986.80 of social value. The KPMG True Value project has helped to kick-start internal discussions about how NS can identify further strategic initiatives that will increase the value the company creates for society and reduce its negative impacts. The co-development of a robust framework has revolutionized the way NS understands its creation, and reduction, of economic, social and environmental value. The insights are improving internal decision-making and strengthening reporting and dialogue with external stakeholders. While writing this thesis, there is some limitation that occurred when doing our research. First, this study consists only of a theoretical view rather than practical study. Second, since there is a short time to complete the research, the researcher doesn't have enough time to review all of the information in the available journals. And the last, the limitation of journals/articles for this study since this study is considered as new research. The time and sources limitation, however, influence the accuracy of our findings. These limitations trigger the next question which is: what difference does disclosure and transparency of the application of the True Value methodology make with respect to discharging accountability for externalities ? Thus, Future research is needed in order to answer the question, and this is the topic for future research.

REFERENCES

Finn, D. W., Chonko, L. B., & Hunt, S. D. (1988). Ethical problems in Public Accounting: The View from the Top. *Journal of Business Ethics, 7*, 605-615.

Groot. (2002). Long term socio-ecological research across temporal and spatial scales.

Faiz, A., Sinha, K., Walsh, M., & Varma, A. (1990). Automotive Air Pollution.

Temba, A. (2019). *Devastations in the Garden of Eden.* Bloomington: AuthorHouse.

Alavanja, M. C. (2010). Pesticides Use and Exposure Extensive Worldwide.

Tyagi, S., Garg, N., & Paudel, R. (2014). Environmental Degradation: Causes and Consequences.

Freeman, R. E., Harrison, J. S., Wicks, A. C., Parmar, B. L., & De Colle, S. (2010). Stakeholder theory: The state of the art.

Freeman, R. E. (2011). Managing for Stakeholders: Trade-offs or Value Creation.

KPMG. (2015). INTRODUCING KPMG TRUE VALUE. 2.

Schmidt, L., & Falk, T. (2020). The Objectives of Stakeholder Involvement in Transdisciplinary Research. A Conceptual Framework for a Reflective and Reflexive Practise.

Adams, C. A. (2008). A commentary on: Corporate social responsibility reporting and reputation risk management. *Accounting Auditing & Accountability Journal*.

Value, S. (2012). A guide to Social Return on Investment. 8.

Makarenko, I., & Plastun, A. (2017). The role of accounting in sustainable development. *Accounting and Financial Control Journal*.

Çalişkan, A. Ö. (2014). How accounting and accountants may contribute in sustainability? *Social Responsibility Journal*.

Horvat, R., & Korošec, B. (2015). The Role of Accounting in a Society: Only a techn(olog)ical solution for the problem of economic measurement or also a tool of social ideology? .

Maas, K., & Vermeulen, M. (2020). A systemic view on the impacts of regulating non-financial reporting.

Hohnen, P. (2007). Corporate Social Responsibility An Implementation Guide for Business.

Nation, U. (2008). Achieving Sustainable Development and Promoting Development Cooperation.

Initiatives, G. R. (2016). GRI 101: FOUNDATION.

Pajares, J. H., & Moneva, J. M. (2018). Corporate social responsibility performance and sustainability reporting in SMEs: an analysis of owner-managers' perceptions . *International Journal of Sustainable Economy*.

Pope, S. (2020). Three types of organizational boundary spanning: Predicting CSR policy extensiveness among global consumer products companies.

KPMG. (2014). A New Vision ofValue.