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**International Conference on Sustainability
(7th Sustainability Practitioner Conference)**

THE REGROWTH OF SUSTAINABLE
**BUSINESS THROUGH
STRENGTHENING
TECHNOLOGY AND
INNOVATION**

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University
Kampus Bukit Jimbaran, Denpasar, Bali, Indonesia

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Chair Board of Trustee, NCCR (National Center for
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University of Kentucky, USA

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• Prof. Danture Wickramasinghe, Ph.D.
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Welcoming Remarks from

Dr. Ali Darwin, Ak., M.Sc., CSRA

Bismillahirrahmanirrahim, Assalamualaikum Wr Wb.

- The Honorable Professor Bambang Brojonegoro Ph.D, Chairman Board of Trustee, National Center for Corporate Reporting.
- Dean of Faculty and Business of Universitas Udayana, Bapak Agoes Ganesha Rahyuda, SE, MT, Ph.D.
- Dean of Faculty and Business of Universitas Brawijaya - Assoc. Prof. Abdul Ghofar, DBA.
- My colleague, Board member of NCCR
- Chairman Board of Director of ICSP, Prof Eko Ganis Sukoharsono Ph.D
- Distinguished Speakers,
- Ladies and Gentlemen,

Welcome to the 7th Sustainability Practitioner's Conference here in Bali which is being hosted by Universitas Udayana for the second time since SPC 4 in 2019. Therefore, I would like to express my enormous gratitude and appreciation to Universitas Udayana, the Faculty of Economics and Business, for hosting this conference with the theme "The Regrowth of Sustainable Business Through Strengthening Technology and Innovation".

The selection of Universitas Udayana as the host of this year's SPC really goes hand-in-hand with the G20 gathering which is due to take place here in Bali on November 15-16, 2022 with the theme 'Recover Together, Recover Stronger'. As Indonesia carries the responsibility for the G20 Presidency this year, we feel it is our duty to bring that spirit to this conference.

Ladies and Gentlemen,

We realize that our global society has been hit by various crises in recent times. For not only have we experienced a health crisis for almost 3 years due to Covid-19, but we have also experienced the increasing impacts of the climate crisis, bringing various disasters that have impacted the environment and human life.

We must remember that climate change can slow the poverty eradication program. That environmental crises can also hinder the targets outlined in the Sustainable Development Goals.

Therefore, our commitment to "recover together, recover stronger" is highly relevant to our efforts to achieve the Sustainable Development Goals.

Our efforts to create a better future for generations to come will require the involvement of many professional organizations within the global community. The organizations, according to their respective fields, must introduce guidelines for their members to be used as vehicles to achieve the sustainable development goals.

For example, the Principle for Responsible Banking is a guideline that requires the banking industry to screen their clients based on ESG Criteria before credit is launched.

In Indonesia, the financial industry is also required to support Sustainable Development through the implementation of Sustainable Finance as regulated in the Financial Services Authority Regulation Number 51 Year 2017.

Another example is an initiative in the mining industry known as the International Council on Mining and Metals. They encourage its members to implement the 10 ICMM principles to achieve the Sustainable Development Goals.

The implementation of sustainable development by business leaders needs to be communicated to the public through Sustainability Reporting. The extent to which a company contributes to the achievement of the Sustainable Development Goals as well ESG Performance can be demonstrated through this kind of report

So that's why, since 2000, the Global Reporting Initiative (GRI) has come up as a front-runner and succeeded in compiling standards for sustainability reports. GRI provides the world's most widely used standards on sustainability reporting and disclosure. In fact, 92% of the world's largest 250 corporations report on their sustainability performance. According to the KPMG International Survey of Corporate Responsibility Reporting, published in 2017, GRI remains the most popular voluntary reporting guideline worldwide

Further developments showed that the report users, especially investors, require additional ESG information to be disclosed. Therefore, other Standard Setter have also emerged: such as the Task Force on Climate-related Financial Disclosures (TCFD), Sustainability Accounting Standards Board (SASB), and International Integrated Reporting Framework. Now, after merger, the last two standards setter became part of IFRS Foundation.

The accounting profession therefore, should also be appreciated and applauded for its role in preparing specific sustainability disclosure standards. As a follow-up to the commitments made at COP 26 in Glasgow last year, the IFRS has issued 2 (two) drafts of the IFRS Sustainability Disclosure Standards. One is related to General Requirements for Disclosure of Sustainability-related Financial Information, and the other one is on Climate-related Disclosures. Public consultation on the two drafts closed at the end of July 2022 and it is hoped that the effective date of these two standards by 2023.

Ladies and Gentlemen,

In closing, I would like to repeat that the achievement of the Sustainable Development Goals and the implementation of sound sustainability practices requires the participation of multi disciplines and the collaboration of various organizations.

Lastly, I would like to thank the Committee for their hard work to make this conference run smoothly and successfully. Stay safe, stay healthy, see you at next year SPC.

Thank you

Welcoming Remarks from

Prof. Eko Ganis Sukoharsono, SE, MCOM (ACCY), MCOM-HONS, CA, PH.D

**Assalamualaikum warahmatullahi wabarakatuh,
Om swastiastu namo buddhaya salam kebajikan,**

- His excellency of Chair Board of Trustee, NCCR (National Center for Corporate Reporting), Prof Bambang Brodjonegoro, or his representative.
- Our honourable Dean of FEB Udayana University, though he couldn't join us today because of his tight schedule, Dr. Abdul Ghofar has asked me to represent him as the dean to give the short welcoming remarks.
- Agoes Ganesha Rahyuda, S.E., M.T., Ph.D., and his vice-dean Dr. Ida Bagus Putu Purbadharmaja, S.E., M.E., it is an honour being with you, I am impressed with your exceptional welcoming speech.
- Our honourable Director of NCSR, Dr. Ali Darwin, I'm honoured for your presence here. He is one of the founding fathers of Indonesian sustainability because, since the beginning, he has been very keen on pursuing our goal today. That is why I appreciate and thank him for his effort.
- Our honourable Speakers:
Prof. Danture Wickramasighe, PhD (Adam Smith School of Business University of Glasgow, UK)
Prof. Dan Stone, PhD (University of Kentucky, USA)
Dr Eryadi Masli (Swinburne University of Technology, Australia)
- Our honourable speakers, attendance, and presenters, not to mention the respectable ICSP committees and members, both offline and online

First of all, nothing can be said except thank Allah SWT, who has been giving us some mercies and guidance so we can attend and gather in this virtual place in good condition, and hopefully, we are here in a happy situation.

It is a great honour for me to greet you all at the 7th Sustainability Conference today at Udayana University. As I mentioned on behalf of FEB UB, and also, I'm combining as the director of NCSR, I would like to express my gratitude for all the presenters and everyone included in this conference.

Distinguished ladies and gentlemen, ICSP is a professional association as a forum to improve the competence of sustainability practitioners, and most of us, as I could claim, are members of ICSP. As a member of ICSP, when you have been certified as a specialist and assurer, you are automatically becoming a member of ICSP. So far, we have more than 2000 members across the nation and south-east Asian countries. ICSP does not only belong to Indonesia but to Asia. Since Dr. Ali Darwin proclaimed the ASSRAT (Asia Sustainability Reporting Rating).

In distinguished ladies and gentlemen, ICSP is established to educate professionals, preserve the natural environment and care for the social capital resources, and accelerate the economy by using the principle of professional guidelines, mainly for global reporting initiative standards as the guidelines.

Distinguished ladies and gentlemen, as already been mentioned by Dr. Ali Darwin, our theme is The Regrowth of Sustainability Business through Strengthening Technology and Innovation are in align with G20 Presidency, "Recover Together, Recover Stronger," meaning that we value togetherness and collaboration to strengthen us in every aspects, namely, preserving the environment, caring to the people, accelerating the economy and also to utilize the technology.

With the idea of our theme. We are supporting the regrowth of sustainability businesses by strengthening our technology. It is possible if we made use of science, technology, and innovation because they are all universally recognized as the key drivers for poverty eradication and essential for sustainability.

Distinguished ladies and gentlemen, the novel COVID-19 offers us a powerful and obvious lesson. It means that COVID-19 has taught us the importance of the rule of science, technology, and innovation so we can survive and live in a better future.

Finally, distinguished guests, ladies and gentlemen, I would like to thank Dr. Ali Darwin for supporting this conference and the Faculty of Economics and Business at Udayana University for your collaboration and generous help in making the conference possible. That is all, thank you very much and enjoy the conference until the end of the session.

Thank you and Assalamualaikum.

Welcoming Remarks from

The 7th Sustainability Practitioner Conference (SPC) Committee
Dr. Eka Ardhani Sisdyani, S.E., M.Com., Ak, CA., CSRA.

Om Swastyastu, Assalamualaikum Wr Wb, Shalom, Namu Budaya, greeting of peace and prosperity to all of us.

- 1) His excellency of Chair Board of Trustee, National Center for Corporate Reporting (NCCR): Prof Bambang Brodjonegoro;
- 2) Distinguished Chairman of National Center for Sustainability Reporting (NCSR): Dr. Ali Darwin;
- 3) The Chairman of Institute of Certified Sustainability Practitioners (ICSP): Prof. Eko Ganis Suharsono Ph.D;
- 4) The Dean of Faculty of Economics and Business Universitas Brawijaya: Associate Prof. Abdul Ghofar, DBA;
- 5) The Dean of Faculty of Economics and Business Udayana University: Associate Prof. Agoes Ganesha Rahyuda, SE, MT, Ph.D.
- 6) The honorable speakers: Prof. Danture Wickramasighe, Ph.D (Adam Smith School of Business University of Glasgow, UK); Prof. Dan Stone, Ph.D (University of Kentucky, USA); and Dr Eryadi Masli (Swinburne University of Technology, Australia); and
- 7) Honorable speakers, moderators, discussants, participants, ladies and gentlemen, either joining this event from the site, here at Faculty of Economics and Business, Udayana University, or online from around the world.

It gives me great pleasure to extend to you all our very warm welcome to the 7th Sustainability Practitioner Conference on behalf of the committee of The Faculty of Economics and Business Udayana University.

This event aims to bring together academics, business, and government to exchange and share thoughts and experiences on the sustainability implementations and assurance in different fields. The Conference also provides an interdisciplinary platform for policy makers, managers, researcher, practitioners, and academicians, coming from various continents, which then will open the opportunity to enlarge our international networking.

Ladies and Gentlemen,

In today's conference, our Honorable speakers will talk about the most recent implementations, trends and concerns on sustainability practices and reporting. It is gratifying to note that the agenda of the conference covers a wide range of interesting topics in the context of sustainability, which is in line with the conference theme: "The regrowth of sustainable business through strengthening technology and innovation". Hopefully, this would help our nation achieve an overall development in the sustainability agenda.

Finally, in this special occasion, I would like to deliver our highest appreciation to the Chairman of NCSR (Dr. Ali Darwin) and ICSP (Prof. Eko Ganis Sukoharsono, Ph.D), the Dean of Faculty of Economics and Business Universitas Brawijaya (Assoc. Prof. Abdul Ghofar, Ph.D), and the Dean of Faculty of Economics and Business Udayana University, who have provided valuable support for this event to be smoothly done. Heartiest congratulations to all presenters and members of the committee as without your support this conference wouldn't have proved to be beneficial to this extent. I hope all of you will enjoy this fruitful conference, and Bali as well.

Om Santi, Santi, Santi, Om. Wassalam Wr Wb, Shalom, Namu Budaya, please stay safe and healthy. Thank you.

Volume 3, November 2022

Table of Content

1. A Case Study of Soe Companies: An Analysis of The Content And Quality Principle Of Sustainability Reports	7
2. A Systematic Literature Review On Sustainability Reporting And Sustainability Performance	13
3. Accounting Information System And Financial Sustainability Of A Private University: Case Study At Private University In Surabaya.....	14
4. An Overview Of Materiality And Stakeholder Engagement In Sustainability Reporting.....	21
5. Analysis Of The Role Of Corporate Governance, Leverage, And Company Size On Banking Sustainability Report.....	22
6. Auditor In Deal With The Demand For Sustainability Services Are they ready yet?	28
7. Building Partnership Or Competition Village Business Sustainability.....	39
8. Circular Economy Approach For Asean's Clean Energy Transition New Opportunities and Challenges after the COVID-19 Pandemic	49
9. Climate Change Vulnerability To Paddy Production In Bali, Indonesia	50
10. Community Based Tourism (CBT) As An Effort To Achieve Sustainable Development Goals (SDGs) Of Villages.....	51
11. Disclosure Of SDGs Sustainability Report Of PT Petrokimia Gresik GRI 2018-2020.....	60
12. Disclosure Of Sustainable Finance In Indonesian Banking From Institutional Theory Perspective.....	72
13. Doing It Right Earnings Management Based On Hindu Religious Principles.....	78
14. E-Government As A Form Of Public Accountability And Emansipatory Spirit or Not?	79
15. Effectiveness Of Organic Waste As Damper On Noise Intensity And Mechanical Vibration Testing Of Pellet Machines.....	80
16. Empirical Study Of The Influence Of Stakeholders On Corporate Social Responsibility	81
17. Environmental Accounting Disclosure Of Mining Companies In Indonesia: Content Analysis Approach	86
18. Environmental Spending, Human Development, Regional Economy, And Environmental Quality: Evidence from the Provincial Regions in Indonesia.....	99
19. Financial Accountability Of Wayang Kulit Performances In Surakarta-Yogyakarta, Indonesia.....	113
20. Gap Positioning And Repositioning Role In Embedding. Sustainability: Reflection By Educator Accountants	123
21. How To Create A Sustainable Village Credit Institution (Phenomenological Research.....	124
22. Implementation Of The Harmony Of Indonesia's Sustainable Development Goals And Sustainable Development Objectives Pt. Pertamina (Persero): Clean And Affordable Energy	130
23. Implementation Of The Triple Bottom Line In The Philosophy Of Rwabhineda (Ethnographic Studies on the Desa Adat Tenganan Pegringsingan)	137
24. Implentation Carbon Tax In The Perspective Of Maqasid Ash-Syariah To Solve The Environmental Problem.....	138
25. Integrated Socio-Environment & Economic Initiatives In Pursuance Of Sustainable Mineral Mining Operation in Indonesia: Point of View from Amman Mineral Nusa Tenggara, Batu Hijau Mine Site – West Sumbawa Regency	139
26. Net Zero Green House Gases Strategy In The Rotary Kiln Of The Portland Cement Industry.....	153
27. Nobel Indonesia, University Social Responsibility Based On Dr Soetomo's Thoughts.....	154

28. Professional Management Role In The Implementation of Corporate Governance and Corporate Social Responsibility for Business Sustainability.....	155
29. RSPO Audit Toward Audit Based On Divinity Values, Is It True	169
30. SIPEDAL As A Sustainability Stimulus On LPD	175
31. Spatial Modeling Of Land Use Changes In The North Coastal City Of Surabaya	181
32. Stakeholders Engagement: Capital To Gain Social License To Operate In Mining Industry	199
33. Strategic Entrepreneurship The Role Of Human Resource Practice And It Capabilities In Managing Performance Firm	211
34. Sustainability Criteria For SMEs Using The Pentuple Bottom Line Approach With The AHP Method	212
35. Sustainability Framework In Higher Education Institution: Agenda For Future Research.....	222
36. Sustainable Development Policy Of Green Transportation System To Support Green Campus Program At Politeknik Negeri Malang.....	223
37. Sustainable Financial Values And Rural Bank Risk Mitigation: An Experimental Study	224
38. Sustainable Governance Of Village-Owned Enterprise: Toward Village Sustainable Development Goals	230
39. Sustainable Innovation Based On Sustainable Value Framework Towards Business Sustainability: An Overview	231
40. Tax Consultant Role And Attributes Phenomena On Sustainable Social Development: Tax Authority, Taxpayer, And Tax Advisor Point Of View.....	232
41. The Digital Transformation Of Accounting Principal Subject.....	233
42. The Effect Of CSR Activities During The Covid-19 Pandemic On Value Relevance	245
43. The Effect Of Size, Profitability And Leverage On Disclosure Of Sustainability Reporting Through The Internet On Registered Mining Sub Sector Companies On The Indonesia Stock Exchange	254
44. The Holistical Happiness Theory Initiating New Theory For Sustainable Finance	255
45. The LQ Analysis And Attractive-Competitiveness Analysis In the Priority Determination of Featured Horticultural Commodities to Drive the Sustainability of Food Security.....	260
46. The Role Of Civic Society On E-Governance Adoption Case Study Of Village-Owned Enterprise (Bum Desa) Pangkah Wetan District	261
47. The Role Of Digital Banking For Sustainability Business Of Islamic Rural Banks In Indonesia.....	262
48. The Role Of Taxpayers' Income And Knowledge Of Taxpayers On The Improvement Of Tax Compliance	263
49. Peran Penghasilan Wajib Pajak Dan Pengetahuan Wajib Pajak Terhadap Peningkatan Kepatuhan Pajak	264
50. The Use Of Performance Measurement Systems And Hospital Waste Management Effectiveness: The Perspective Of A Top Management Team Member	265
51. Tracking The Corporate Social Responsibility Practices (A Case Study in PT. PG Gorontalo	266
52. Understanding And Awareness Of Green Accounting Application For MSMES (Study On Tofu Industrial Estate, Tropodo Village, Indonesia	267
53. Validate Field Survey Data Through Mobile Application (Case Study In Ministry Social Integrated Welfare Data)	268
54. Village Financial Management An Overview Of Habermas Critical Theory	274

A CASE STUDY OF SOE COMPANIES: AN ANALYSIS OF THE CONTENT AND QUALITY PRINCIPLE OF SUSTAINABILITY REPORTS

Alfonus Natanael *
Carmel Meiden

ABSTRACT

This study intends to examine the disclosure of the quality and content standards for sustainability reports, particularly in Indonesian state-owned enterprises. Making sustainability reports as a media that can be used to disclose sustainability challenges has become more popular as firms and stakeholders become more aware of sustainable business practices. From this study of 11 state-owned businesses, it is clear that the materiality indicator, when compared to other indicators, has the highest value in terms of the sustainability report's overall content principle. This is because the materiality indicator highlights all aspects that are at the heart of the report's discussion. On the basis of quality, accuracy and clarity indicators receive the best marks from the quantitative and qualitative techniques since they may accurately represent the caliber of a sustainability report. Additionally, during the research period, it was observed that the movement for the disclosure of sustainability reports on each indicator was extremely erratic due to changes in the necessity for problem disclosure and also compliance with governing rules.

Keywords: *sustainability report, content principle, quality principle*

1. INTRODUCTION

The business must account for all of its business operations, including non-financial ones. The duty for reporting financial performance is reflected in the company's financial statements, and the annual report offers reporting on non-financial business operations. The annual report looks to be deficient in relaying non-financial information, nevertheless, given the advancement of the times and the rising level of environmental consciousness. From an economic, environmental, and social perspective, stakeholders want more in the information delivery. This is the rationale behind how sustainability reports, a type of corporate reporting on an organization's social and environmental obligations, came to be. Stakeholders perceive sustainability reports as a new awareness for businesses in conveying disclosures and contributions to sustainable development (Cantele et al., 2018; Tsalis et al., 2018).

The sustainability report has been in preparation for a considerable amount of time. According to Gokten et al., (2020), the process of developing a sustainability report framework began in 1962 and continued until it was standardized in 2016. The Global Reporting Initiative (2013) outlined guidelines that should be followed while creating a sustainability report in order to preserve the report's quality. The corporation released a sustainability report. When creating their sustainability

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report, businesses should consider both the concept of quality and the principle of substance. The Financial Services Authority (OJK) of Indonesia has issued Financial Services Authority Regulation Number 51/POJK.03/2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies, which regulates the requirement for companies to submit sustainability reports.

According to a 2020 GlobeScan and GRI study, Indonesia rated #1 in public confidence in the filing of sustainability reports by Indonesian enterprises (Wuryasti, 2020). This aligns with OJK's commitment to supporting the advancement of Sustainable Finance projects, and OJK values this. According to GlobeScan CEO Chris Coulter, the survey's findings demonstrate that businesses are figuring out how to produce sustainability reports more accurately, which is the cornerstone of a successful sustainability strategy.

Transparency in the disclosure of sustainability reports is the subject of research by Zsóka & Vajkai (2018). The study's findings show that while these businesses make every effort to adhere to the standards for content and quality that are used as guidelines when submitting sustainability reports, there are still some challenges that the businesses face. Different research by Kuswanto (2019) revealed that there were discrepancies in the evaluation of the strategy for disclosing sustainability reports. This study examines the amount and quality of disclosure of sustainability reports, and the findings show that while the quantity or number of submissions for disclosure of sustainability reports is pretty excellent, the quality of disclosure of sustainability reports is still relatively poor.

The author intends to examine Indonesia's disclosure of sustainability reports, particularly those published by state-owned enterprises, between 2017 and 2021 based on the research that is currently available. This study aims to persuade readers of sustainability reports of the indicators specified in the standards for report quality and substance. For the disclosure of sustainability reports to be developed in Indonesia, the study's findings are anticipated to be helpful. ☺

2. LITERATURE REVIEW AND HYPOTHESES

Stakeholder Theory

Stakeholder theory, according to Freeman (1984), is the notion that businesses or organizations need to take into account both groups and individuals who may influence and are also impacted by the accomplishment of organizational goals. Freeman also stated that there are two types of stakeholders: internal parties and external parties. Internal parties are represented by employees, suppliers, owners, and customers, whereas external parties include the government, rival companies, consumer advocates, environmentalists, special interest groups, and the media. The moral viewpoint and the ethical perspective are the two views that stakeholder theory emphasizes, according to Ghozali (2020). The ethical perspective holds that stakeholders have certain rights that should not be violated, especially when it comes to the disclosure of information about the organization's impact on stakeholders, while the moral perspective believes that every stakeholder has a right to expect fair treatment from the company.

Corporate Social Responsibility (CSR)

By promoting social good that is not related to the firm's interests, Dmytriiev et al. (2021) describe CSR as a type of assurance from the corporation toward its duties to the community. Regarding CSR in Indonesia, it is also governed by the Limited Liability Company Law Number 40 of 2007 which defines it as a commitment from the company to participate in sustainable economic development with the aim of improving the quality of life and the environment that is advantageous to the company itself, the local community, and society (Indonesia, 2007).

Sustainability Report

Sustainability reporting is defined by Global Reporting Initiative (2013) as a process of measuring, disclosing, and holding business stakeholders, both internally and publicly, accountable for organizational performance in relation to sustainable development goals. The Financial Services Authority of Indonesia defined a sustainability report as a company's announcement to the public that includes the economic, financial, social, and environmental performance of a Financial Services Institution, Issuer, and Public Company in operating a sustainable business in POJK number 51 of 2017 (Otoritas Jasa Keuangan, 2017). Two concepts are used by GRI in its guidebook to illustrate how to prepare a sustainability report so that it can be of high quality. The two guiding principles are the guiding principle of content and the guiding principle of quality, with the guiding principle of content being represented by four indicators: stakeholder involvement, sustainability context, materiality, and equipment. The quality concept, however, has six characteristics that warrant attention: balance, comparability, accuracy, punctuality, clarity, and reliability.

3. RESEARCH METHODS

This study employs the content analysis approach, which is a research method for drawing conclusions that may be duplicated by considering the context (Krippendorff, 2018). Additionally, content analysis is a methodical test that can be repeated from communication symbols in which the symbols are given a numerical assessment based on reliable measurements and analysis utilizing statistical methods in characterizing communication, generating conclusions, and also giving context (Riffe et al., 2019). The researcher originally comprehended the idea of content guidelines and quality principles based on GRI. The content principle has four components, and the quality principle has six. Each element also has a GRI standard number assigned to it. The researcher then examines the disclosures in the sustainability report to see if the business has used it. On research work papers that detail the full process from beginning to end, the analytical activities are reported. According to Gunawan & Abadi's (2017) methodology, each indicator's analytical score is calculated using both a quantitative and qualitative approach. The findings from this analysis are used as research findings depending on each research challenge and are critically analyzed.

4. RESULTS AND DISCUSSION

The Fundamental Value of Sustainability Report Content

It is clear from the examination of the sustainability report's guiding principles that the materiality indicator, which is rated first, has a maximum value of 2.18. The second-ranked completeness indicator has a maximum value of 1.98. The sustainability context indicator is placed third with a maximum score of 1.92. Stakeholder participation is the fourth-ranking indicator, with a maximum value of 1.61. This demonstrates that the business considers materiality indicators to be highly relevant to report to stakeholders. From an ethical and moral standpoint, it makes sense for stakeholders to learn relevant information about what the organization has done to implement sustainable development. The economic, social, and environmental elements that the firm undertakes as a form of duty carried out by the corporation to the community are reflected in the materiality indicators in the sustainability report. This does not imply, however, that other indications lack worthwhile disclosures. The materiality indicator is the focus of disclosure in the sustainability report in this situation. Each indicator has its own submission requirements.

Quality Principle Value in a Sustainability Report

According to the findings of the assessment of the sustainability report's quality principle, the clarity indicator has a maximum value of 6.53 and is placed first. The accuracy indicator is placed second with a maximum value of 5.62. The dependability indicator ranks third, with a maximum score of 3.09. The comparison indicator is placed fourth, with a maximum value of 1.99. The punctuality indicator is placed fifth and has a maximum score of 1.95. The balance indicator is placed sixth, with a maximum value of 1.11.

Based on the value of the principle of content and the principle of quality offered in the research performed by Kuswanto (2019), the number of disclosures will be larger when compared to the quality of disclosure in the evaluation of aspects by aspect viewed from the principle of content. However, when looking at the total sustainability report, as indicated in the quality principle, the amount and quality of disclosure are fairly high.

Quantitative & Qualitative Development Principles of Sustainability Report Content

Based on the content analysis of both quantitative and qualitative components of the sustainability report, the data on the evolution of the content principle is extremely volatile. Each indicator's information value fluctuates from year to year, which is natural owing to changes in reporting techniques and revisions to the disclosure requirements in sustainability reports. In general, the substance of the indicators of the sustainability context changed significantly over the research period, both quantitatively and qualitatively. This is due to changes in the large picture of the delivery of items or aspects that the organization considers significant, but there aren't many changes in the details.

Quantitative & Qualitative Development Sustainability Report Quality Principles

Data on the evolution of quality standards show that the value of the publication of sustainability reports increases and decreases. One of the indicators that has seen the most significant movement is the indicator of balance and reliability, which indicates a change in the comparative information on events presented in the sustainability report as well as the use of independent auditors in the assessment of the sustainability report. The applicable legislation and changes to the requirement for transparency in sustainability reports are one of the driving forces behind this movement.

5. CONCLUSIONS AND SUGGESTIONS

Based on the findings of the study, it is possible to infer that the materiality indicator is the most important indicator in the content of sustainability reports for state-owned enterprises. The materiality indicator is an indicator that represents the economic, social, and environmental factors in a sustainability report.

According to the sustainability report quality principle, the accuracy indicator has the highest value when compared to other indicators using a quantitative approach, and the clarity indicator receives the highest score when compared to other indicators, which suggests that from the sustainability report presented, accuracy and clarity are important indicators in its disclosure.

Due to changes in the need for the disclosure of sustainability report information as well as changes to applicable standards or regulations, there was a shift away from disclosing the fundamentals of the content and quality of the sustainability report where it was natural to happen during the research period.

The findings of this study can help businesses and stakeholders by offering recommendations for how to improve sustainability reporting by using quantitative and qualitative techniques. Furthermore, investors can utilize the sustainability report as one of the data sources when making decisions. Future scholars can create an evaluation of sustainability reports by examining or comparing data from various industries, as well as by comparing those data with changes in the appropriate requirements.

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A SYSTEMATIC LITERATURE REVIEW ON SUSTAINABILITY REPORTING AND SUSTAINABILITY PERFORMANCE

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ABSTRACT

Purpose - The purpose of this paper is to summarize the previous research finding on sustainability reporting and sustainability performance

Design/methodology/approach – this research uses a systematic literature review on 350 paper that matched the search criteria. After applying filters and narrowing the sample to a total of 75 papers of 5 year period (period 2018-2022) that were finally content analyzed for this study in order to identify the theories, methodologies and opportunities for future research

Findings – findings demonstrate that in most of the cases, sustainability reporting showed a positive association and supported sustainability performance. There are perceptions tend to support the argument that sustainability reports reflect the impression on management strategy to achieve sustainability performance and minimizing negative outcomes on people, planet, and profit. The sustainability performance measured by ESG scores.

Originality/value – this research has explored the implementation of sustainability that support sustainable performance.

Keywords – Sustainability, Sustainability Reporting, Sustainability performance, ESG score.

Type – Literature review

ACCOUNTING INFORMATION SYSTEM AND FINANCIAL SUSTAINABILITY OF A PRIVATE UNIVERSITY: CASE STUDY AT PRIVATE UNIVERSITY IN SURABAYA

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ABSTRACT

The purpose of this study is to review the concept and impact of accounting information systems and financial performance in a private university. The research method uses a qualitative approach and case study. The case study conducted at a private university in Surabaya. The university has 2 major information system application software, which are academic and financial applications. This study finds that financial accounting information & financial performance system is very important for assessing private university activities and timeliness in financial reporting. Accounting information system theory is also indispensable for reliable implementation and analysis of university financial plans.

Keywords: Accounting Information System, Financial Sustainability, Private University

INTRODUCTION

Improving the quality of education is not an easy thing, because it is not only related to technical problems, but includes various complex issues, both related to planning, funding, efficiency, and effectiveness of the implementation of the education system. To realize a quality education, it is necessary to have comprehensive and professional financial management of the resources available in universities. One of the resources that need to be managed properly in higher education is financial performance. Finance is a source of funds that is needed by universities to carry out daily operational activities. A university must be able to guarantee the availability of funds to support the implementation of the *Tri Dharma* and improve the quality of the university on an ongoing basis. Efforts made by universities in raising funds must refer to the vision, mission, character of universities as legal entities that are not profit-oriented and do not violate applicable laws and regulations.

Finance is something that is needed by universities to carry out daily operational activities. A university must be able to guarantee the availability of funds to support the implementation of the *Tri Dharma* and improve the quality of the university on an ongoing basis. Healthy, a transparent and accountable financial management is the main goal of higher education. However, the principle of transparency in financial management creates its own difficulties for a university. This is due to the frequent incompatibility of the budget items that have been made with the operational activities of higher education institutions which tend to be flexible.

Accounting Information System is widely used by organizations or entities that are useful for automating and integrating the operations of their businesses or businesses. The main goal of most entities from adopting this accounting information system is to increase the efficiency and effectiveness of their business so as, to increase competitiveness. Accounting Information System is also important in helping to facilitate management decision making, internal control,

and improve the quality of financial reports so that they are reliable and comparable. The use of Accounting Information System is also very important for any effective decision-making process and adequate information is expected. The Accounting Information System ensures that each level of management gets sufficient, relevant, and correct information for planning and controlling the activities or activities carried out by the entity.

Accounting Information System

According to Grande, et al. (2011), Accounting Information System is defined as “tool which, when incorporated into the field of Information and Technology systems (IT), were designed to help in the management and control of topics related to firms’ economic-financial area”. The resulting statistical reports can be used internally by management or externally by other interested parties including investors, creditors, and tax authorities. (Sajady et al., 2008) states that effective accounting information system will enhance financial statement quality.

Accounting information system output depend on the quality of data, garbage in garbage out is the result of poor data quality, and therefore data quality is important to Accounting Information System (Xu, 2003). All data production processes (data collection, data storage, and data utilization) must work properly in order, to achieve high data quality (Lee and strong 2003). According to Xu (2009), inaccurate and incomplete data may damage competitiveness of firms. They also found out that that input control and competent employees are important to data quality of accounting information system.

The quality of the accounting information system influences the progress of the university if it has accounting information technology. The application of accounting information technology can help accounting information systems that have been running at accredited universities to be of higher quality. Accounting information technology can be in the form of applications used by users of accounting information systems for the sustainability of universities.

Financial Sustainability

Sustainable Finance is the process of taking due account of environmental, social and governance (ESG) considerations when making investment decisions in the financial sector, leading to increased longer-term investments into sustainable economic activities. Assessment that a university will have sufficient funds to meet all its resource and financial obligations, whether the funds continue or not. University capacity to obtain income in responding to demand to maintain a productive process at a stable or developing level to produce results and get a surplus, and with that surplus the university can continue activities that can develop it.

The final condition of financial sustainability is to ensure that companies tend to survive in the long run, that is, that it is not ended by insolvency, which is handled as the second condition, or neglect by the owner in this case the foundation. Sustainable finance related to financial management or management can be interpreted as a process of carrying out financial management activities by mobilizing other people's energy, considering the effectiveness and efficiency aspects involved. Related to the acquisition, funding, and management of assets with several overall objectives starting from planning, organizing, implementing, to monitoring.

Education Finance Management

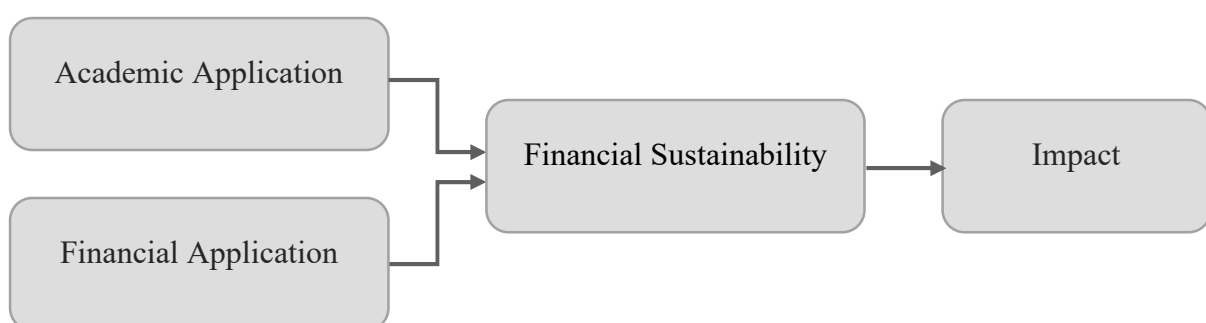
According to Article 48 Law No. 20 of 2003 concerning National Education System, the management of education funds is based on the principles of justice, efficiency, transparency, and public accountability. The following is an explanation of the financial management of education, namely transparency, accountability, effectiveness, and efficiency:

1. Transparency
Transparency means openness. Transparency in the field of management means that there is openness in managing an activity that occurs in higher education. Disclosure in the source of income and the amount, details of use, and accountability must be clear to make it easier for interested parties to find out the finances.
2. Accountability
Accountability in financial management means that the use of college money can be accounted for in accordance with pre-determined plans. Based on a predetermined plan and applicable regulations, universities spend money responsibly. Accountability can be done to parents, society, and government.
3. Effectiveness
Effectiveness is often defined as the achievement of predetermined goals. Garner (2004) defines effectiveness more deeply, because effectiveness does not stop until the goals are achieved but arrive at the qualitative results associated with achieving the vision of the institution.
4. Efficiency
Efficiency is closely related to the quantity of the results of an activity. Efficiency “characterized by quantitative outputs” (Garner, 2004). Efficiency is the best ratio between input and output or between power and output. The power in question includes energy, thought, time, cost.

RESEARCH METHOD

This research approach uses the perspective of the scope of Accounting Information System & Financial Sustainability in the form of case study research. This case study research is taken directly from the source of the research object, namely a private university in Surabaya. The accounting information system at a private university in Surabaya has 2 applications that can support financial sustainability, namely academic applications, and financial applications. It is from this that builds this research by looking at the impact that occurs from financial sustainability.

Figure 1. Research Framework



DISCUSSION

The following is the essence of the discussion of this article:

1. Academic Application

This application is used for academic financial data management such as student bills, payment methods, billing transactions, and payment transactions. The financial data can facilitate the processing and storage of financial data related to student academics. The application also knows the amount of student bills (receivables) and student payments. Receivables from students can be seen starting from Study Programs, Faculties, and Universities, also seen on a monthly, semi-annual, or annual basis.

Academic finance applications will help universities in processing data regarding financial issues. Information systems also have a positive impact on users or for recipients of information systems, so that many universities have implemented academic financial information systems. The quality of the system and service will also have an impact on student satisfaction. The following are the activities carried out by users of academic applications and the outputs of the activities carried out:

Table 1. User Activities Academic Application

User	Activities	Documents
Financial Administration	<ol style="list-style-type: none"> 1. Inputting student registration bills 2. Periodic overall student billing 3. Sending student bill notifications 4. Provision of payment dispensation facilities 5. Making payments in instalments or deposits 6. Student payment check 7. Collection of fines for late payment of students 	<ol style="list-style-type: none"> 1. Student bill 2. Student billing notification via mobile app 3. Payment dispensation 4. Student payment fines 5. Student payment proof 6. Student billing report 7. Student payment report
Head of Department	<ol style="list-style-type: none"> 1. Monitoring student bills 2. View student billing reports 	<ol style="list-style-type: none"> 1. Student bill 2. Billing report
Dean	<ol style="list-style-type: none"> 1. Monitoring student bills 2. View student billing reports 	<ol style="list-style-type: none"> 1. Student bill 2. Billing report
Vice Rector for Financial Affairs	<ol style="list-style-type: none"> 1. Control student payments 2. Monitoring student bills 3. View student billing reports 	<ol style="list-style-type: none"> 1. Student payment 2. Student bills 3. Student billing report

2. Financial Application

Financial applications used in this university include financial transactions related to the entry and exit of funds managed by the university. Because the university is under the auspices of the Foundation, not only universities can access this application but also the Foundation. University financial transactions are inputted into this application, then processed according to the accounting cycle, starting from journaling, ledgers, to financial reports. The financial reports produced by the university are then further processed by the Foundation which also manages the assets owned by the university. The Financial Report is expected to be able to provide information that can be used as a decision-making tool by stakeholders. Decisions taken by stakeholders can be the basis for the financial sustainability of an agency, in this case universities.

Table 2. User Activities Financial Application

User	Activities	Documents
Financial Administration	<ol style="list-style-type: none">1. Recording of incoming and outgoing transactions (Cash and Bank) University2. General journal entry and adjusting journal entry3. Recording of receivables (Education fund)	<ol style="list-style-type: none">1. Cash Transfer2. General Journal3. Ledger4. Income Statement5. Trial Balance
Vice Rector for Financial Affairs	<ol style="list-style-type: none">1. Monitoring financial transactions2. Monitoring financial reports	<ol style="list-style-type: none">1. Income Statement2. Trial Balance
Foundation	<ol style="list-style-type: none">1. Listing of fixed assets2. Recording of entry and exit transactions of the University	<ol style="list-style-type: none">1. List of Fixed Assets2. Consolidated Financial Statements

3. The Relationship an Applications and Financial Sustainability

a. Student payments are well controlled

An accounting information system can run well if the system is built according to needs and can be used by users properly as well. The accounting information system in the form of a student payment application is expected to provide easy payments for students, such as being able to pay anytime and anywhere and is well integrated, so that student payments can be controlled. With smooth student payments, the university's finances will be smoother. The smoother payments from students, the more effective and efficient university activities or programs need.

b. Financial reporting went well

If users or implementers of financial applications can use effectively, financial transactions are entered according to accounts and on time, then financial reporting will also run well. The resulting financial reports will be accurate and accountable. These accountable financial reports can make university finances sustainable.

4. The Impact Financial Sustainability

a. Guaranteed Financial Management

Financial management is guaranteed if the principles of educational financial management are met. The management of financial management can be seen from the fulfilment of transparency, accountability, effectiveness, and efficiency. Financial transparency is needed to increase the level of trust of stakeholders, including parents of students, the community, and the government. Then transparency can also create mutual trust between the government, the community, parents of students and the entire academic community through the provision of information and ensuring the ease of obtaining accurate and adequate information. Accountability is measured based on predetermined plans and applicable regulations, so universities must be able to spend money responsibly. Accountability can be carried out to parents of students, the community, and the government, depending on where the funds are obtained from. Financial management can be said to meet the principle of effectiveness if the activities carried out can finance the activities that have been planned to achieve the goals of the institution that have been set in the college budget plan. With a high level of efficiency and effectiveness, it is possible for the implementation of services to the community to be more satisfying by using the available resources in an optimal and responsible manner.

b. Eligible for Audit

Auditing in higher education is very useful in relation to accreditation. Audits are carried out not only academically but also non-academically. This finance is an example of a non-academic audit but plays a very important role in increasing accreditation. This audit can be done easily if academic and non-academic activities are documented through a computerized information system. If the data required for the audit is well documented, it can be said that the university is eligible for an audit.

c. Upgrading Accreditation

External Quality Assurance better known as Accreditation. One indicator of the quality of a study program is whether the study program's accreditation score describes the study program. The implementation of study program accreditation which is an external quality assurance system continues to develop from time to time and the applicable system. Regarding the feasibility of audits, one of the assessments is that universities can achieve superior accreditation if they are balanced with good financial audits as well.

CONCLUSION

From the discussion, it can be concluded that there is a positive impact from the Accounting Information System in the form of Academic Applications and Financial Applications which include recording, management, and financial reporting in the object of this research, namely private universities in Surabaya. This impact can be seen in the financial sustainability of the university due to well-scheduled billing, so that students can pay on time, and an impact on timely financial reporting so that it is worthy of an audit so that it has a good impact on the value of accreditation.

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AN OVERVIEW OF MATERIALITY AND STAKEHOLDER ENGAGEMENT IN SUSTAINABILITY REPORTING

Ayu Aryista Dewi

ABSTRACT

The purpose of this paper is to investigate the extent of disclosure of materiality and stakeholder involvement in sustainability reporting, especially in non-financial companies in Indonesia. A total of 153 companies that use GRI Standards were analyzed in this study. The content analysis method is applied to gain an understanding of the extent to which the principles of materiality and stakeholder inclusiveness are implemented in corporate sustainability reporting. Research provides evidence that the level of materiality and stakeholder disclosure varies across different industries. Most companies have applied the principle of materiality and how stakeholders are involved in the sustainability reporting process. However, few of them follow-up on the material issues raised by stakeholders. In addition, companies need to provide information about the basis for selecting stakeholders and the frequency of stakeholder involvement. The results of this study provide new insight about the implementation of GRI principles in sustainability reporting.

Analysis of the role of Corporate Governance, Leverage, and Company Size on Banking Sustainability Report

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ABSTRACT

This study examines the impact of corporate governance, as well as the leverage and size of the company and the level of disclosure of sustainability reports. The population in this study are all banking companies listed on the Indonesia Stock Exchange for the financial year ending December 31, 2019-2021. The sampling technique was carried out by purposive sampling method. The results of the multiple regression test show that corporate governance and leverage have a positive and significant effect on the level of disclosure of sustainability reports. The results of the firm size test show that firm size has a negative and significant effect on the disclosure of sustainability reports.

Keywords: Sustainability report, corporate governance, Leverage, and size

Background

Sustainability Report is a report published by a company in the report disclosed on the economic, social, and environmental impacts (Nasution & Adhariani, 2016). Banks as financial institutions that play an important role in supporting the economy in Indonesia face increasingly complex risks and challenges. The risks and challenges faced by the bank are internal and external. The internal challenges of the bank come from the management of the bank itself, while the external challenges of the bank can come from the economic conditions of a country where the bank operates. In addition, the economic condition of the country that is the parent of foreign banks operating in Indonesia is also a challenge for banks.

Agency Theory

Agency theory according to Jensen dan Meckling (1976) views that the management of the company as an agent for the shareholders, will act with full awareness for its own interests, not as a wise and prudent and fair party to the shareholders. In other words, agency theory views that the management cannot be trusted to act as well as possible for the public interest in general and shareholders in particular. Agency Theory expressed by Jensen & Meckling (1976) Companies that have high leverage will disclose more information voluntarily but this theory is not supported by empirical evidence researched by (Chakroun et al., 2017) Instead, it proves that there is a negative relationship between the sustainability report and leverage. Greater governance is less likely to be influenced by management, but requires greater agency costs (Rukmi & Hutami, 2015).

Legitimacy theory

Based on the theory of legitimacy, large companies that are supervised by the public are companies that have great power over resources (Anugerah et al., 2018). Several studies have found a significant positive relationship between company size and sustainability report reporting in the perspective of legitimacy theory, a company voluntarily reports its activities if the management considers that this is what the community expects. So the company continues to strive to ensure the company's operations in the community or environment where the company is located (Deegan, 2004).

Sustainability Report

Haris et al., (2019) defines that the sustainability report is reporting on the economic, social, and environmental aspects of the impact of the company's performance and its products in the context of sustainable development. With the concept of sustainable development, the company is more based on the Triple Bottom Line (TBL), namely economic, social and environmental (Fauziah et al., 2020) (Amran et al., 2014). Lipunga,(2014) reporting is measured by disclosing a dummy, namely for those who disclose sustainability reports = 1, companies that do not disclose sustainability reports = 0

Corporate Governance

Weak implementation of Corporate Governance triggers various financial scandals. Many companies went bankrupt which was indicated as a result of not implementing the principles of Good Corporate Governance. The government's seriousness in paying attention to the importance of implementing good corporate governance can also be seen from a copy of the Financial Services Authority Circular Letter Number 32 / POJK.04 / 2015 concerning "Guidelines for the Governance of Public Companies" (OJK, 2015). A copy of this circular contains the obligations of all public companies to implement good corporate governance. In addition, this copy also contains guidelines for each company in implementing corporate governance. The practice of corporate governance is one of the mechanisms within the company to mitigate agency problems. Governance is measured by:

$$GCG = \frac{\text{Total number of principles applied}}{\text{Total number of principles}} \times 100 \%$$

Leverage

Leverage shows the company's ability to meet its obligations, the higher the level of leverage, the higher the risk of the company because the lower the company's ability to meet its obligations. The company will try to fulfill it by presenting a good company performance or improving from the previous period. Penelitian Jian dan Wong (2003) dan Bona-Sanchez et al. (2017) prove that the level of leverage has a positive effect on company performance. On the contrary, Cheung et al. (2009), Habib et al. (2017), dan Chen et al. (2009) found that the higher the company's leverage, the lower its performance. This study uses leverage as a control variable as measured by total liabilities divided by total assets (Michelon, et.al 2015).

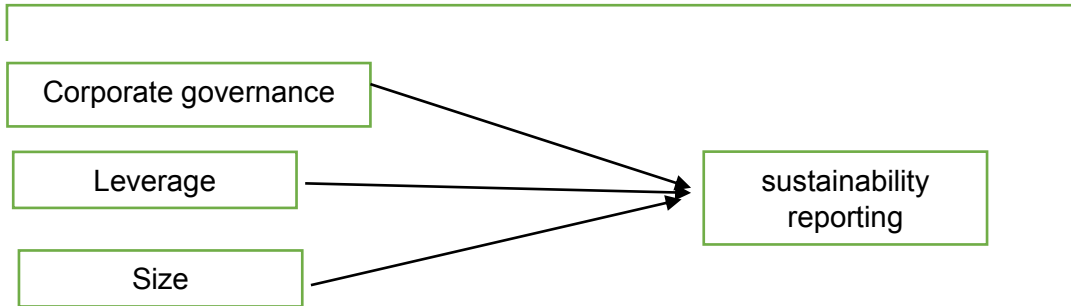
$$laverage = \frac{\text{total liabilities}}{\text{total assets}}$$

Size

Habib et al., (2017) found that company size had an impact on lowering company performance. In contrast, Cheung et al. (2009), Main et al. (2010), Wahab et al. (2011), Chen et al. (2009), and Downs et al. (2016) prove that the larger the size of the company, the better the performance. This study uses firm size as a control variable which is measured using the natural log of total assets (Habib et al., 2017).

$$\text{Size} = \ln \text{total aset}$$

Thought Framework Image



Hypothesis Development

Relationship of Good Corporate Governance to sustainability reports.

Good Corporate Governance of a company can be realized one of them through the formation and appointment of competent and qualified management members. This is done to ensure that management acts at its best for the benefit of stakeholders. Disclosure of information in detail will give a picture of the actual performance of the company, so that the more information provided by the company, especially in the sustainability report, it will increase the confidence of investors and other stakeholders. The hypothesis taken is that Good Corporate Governance has a positive effect on sustainability reporting.

Leverage relationship and sustainability report

The lower the leverage, the higher the sustainability reporting reported by the company (Dyduch & Krasodomska, 2017). The lower the leverage in the company, the higher the company will disclose sustainability reports. The second hypothesis Leverage has a positive effect on sustainability reporting

The relationship of company size has an effect on sustainability reports.

The bigger the size of the company, the bigger the company to disclose sustainability reporting. Larger and complex companies, namely large companies usually have a need to disclose sustainability reports (Razali & Arshad, 2014). Disclosure of the sustainability report of each company will be different depending on the condition and size of the company. The larger the size of the company is assumed to have a greater political risk than small companies, the larger it is also to encourage companies to disclose sustainability reports (Rachman, 2018). The third hypothesis is that the size of the company has a negative effect on sustainability reporting

Data Collection and Research Sample

This study uses secondary data. Data collection method on The research was obtained through the annual report and the sustainability report obtained through the Indonesia Stock Exchange (IDX) website. Data on sustainability reports were obtained through the global reporting initiative (GRI) document. Sampling in this study used a purposive sampling method, namely selecting samples based on criteria. The criteria for companies that can be sampled are all bank companies listed on the Indonesia Stock Exchange with the observation period used in this study starting from 2019 to 2021.

Analysis Method

Using regression analysis to test the relationship of influence between independent and dependent variables and to test the research hypothesis.

The model of the research is as follows:

$$SR = \alpha_0 + \alpha_1 GCG + \alpha_2 Leverage + \alpha_3 SIZE + e \dots\dots\dots(1)$$

Keterangan:

SR= Sustainability Reporting.

GCG = corporate governance.
 Leverage= leverage
 Size = company size.

Descriptive statistics

Descriptive analysis is used to describe the general description of the data used in the research so that it can be checked. The dependent variable in this study is the sustainability report, while the independent variables in this study are corporate governance (proxied by managerial performance according to the 2015 OJK rules), Leverage and company size.

Descriptive Statistics

	Mean	Std. Deviation	N
SR	.965255	.0241649	137
GCG	.771212	.1819283	137
LAVERAGE	29.610708	1.8341643	137
SIZE	.75582	.194996	137

Multicollinearity

Multicollinearity test was conducted to test the correlation between independent variables in the regression model. The multicollinearity test in this study was carried out using the Variance inflation factor (VIF) test. If the value of VIF < 10 then it is said that there is no multicollinearity, on the contrary if > 10 then there is multicollinearity among the independent variables (Gujarati, 2010). Autocorrelation

Heteroscedasticity

Heteroscedasticity test is used to test whether the regression model has an inequality of residual variance from one observation to another (Field, 2009). From the results of the heteroscedasticity test on the model, it can be seen that the prob value is 0.0000 so that, it indicates there is no heteroscedasticity problem because the parameter coefficients for each independent variable are not significant ($p > 0.05$) (Gujarati, 2004).

Hypothesis analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.884	.035		25.332	.000
	GCG	.023	.011	.174	2.066	.041
	LAVERAGE	.003	.001	.193	2.077	.040
	SIZE	-.016	.012	-.133	-1.424	.157

$$SR = 0,884 + 0,023 GCG + 0,003 Leverage - 0,016 SIZE$$

Discussion

Governance and sustainability report

The first hypothesis states that governance has a positive effect on sustainability report. The results of the study indicate that corporate governance has a significant influence on the disclosure of the sustainability report. This is because the better the implementation of corporate governance, the more it encourages companies to carry out social

responsibility and the reporting. Based on the theory, it states that in carrying out the GCG mechanism, the company does not only pay attention to the economic value of its activities but also other added values such as the balance of stakeholder interests and compliance with regulations and norms that apply to the activities carried out. So, the better the implementation of GCG, the better the company's SR disclosure (Abdulrahim et al., 2021)

Leverage and sustainability report

The second hypothesis proposes that there is an influence between Leverage and sustainability reporting, thus the lower the leverage, the higher the sustainability reporting reported by the company (Dyduch & Krasodomska, 2017). The effect of leverage on sustainability report disclosure is because companies with high leverage seek to gain legitimacy through sustainability reports. Disclosure of sustainability reports can maintain the support and trust of creditors. Sustainability information can help lenders to determine risk factors associated with business practices company (Nasir et.al, 2014).

Size and sustainability report

The third hypothesis (H3) shows that firm size has an effect on positive to the sustainability report. Referring to stakeholder theory, all business activities and decisions taken by stakeholders in a company affect stakeholders. Thus, larger and more complex companies, i.e. large companies, usually have a need to disclose sustainability reports. There is no effect of company size on the disclosure of sustainability reports because large companies, have an urge to withhold information that contains value is relevant to avoid the pressure of political costs in law and tax increases, as well as pressure to carry out social responsibility (Dyduch & Krasodomska, 2017). For these reasons, it is possible that management prefers to disclose only necessary reports. This proves that the increase in the company's total assets does not guarantee the company to disclose the sustainability report. Companies that have large assets do not necessarily pay attention to good performance through their concern for the social environment. The company maintains a high level of assets in order to get a good image because it is seen as a large company.

Conclusions and recommendations

Conclusion

Company size and sustainability reports are not significant. The size of the company cannot influence the company to make a sustainability report. This means that the lower the leverage value, the higher the company's disclosure of sustainability reporting. The results do not prove that board size and profitability have no significant effect on sustainability reporting. This study examines the impact of corporate governance, as well as leverage and firm size and level of disclosure of sustainability reports. The population in this study are all banking companies listed on the Indonesia Stock Exchange for the financial year ending December 31, 2019-2021. The sampling technique was carried out by purposive sampling method. The results of the multiple regression test show that corporate governance and leverage have a positive and significant effect on the level of disclosure of the sustainability report. The results of the firm size test show that firm size has a negative and significant effect on the disclosure of sustainability reports.

Suggestion

The weakness of this study is that the sample only focuses on companies listed on the Indonesian Stock Exchange. For companies to pay more attention to the environment and social, considering that stakeholders have an important role in determining the sustainability of the company's life. As a suggestion for conveying information to

stakeholders, the company can make sustainability report, completely and properly using the guidelines globally recognized.

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Auditor in Deal with The Demand for Sustainability Services: Are they ready yet?

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Abstract

This paper is aimed to discuss the role of auditors as profession not only provide financial statement auditing services, but also contribute to providing confidence in the sustainability of financial reporting from the Global Financial Crisis, making the company's life and sustainable growth the main goal of the company. The role of the auditor in sustainability services starts from the definition of the Going Concern (GC) assumption seen from an academic and regulatory perspective, to continue the auditor's assessment standard on this principle. Furthermore, investors' perspectives on the role of auditors and stakeholders when the auditor issues a Going Concern Opinion (GCO). Previous research related to the consequences of GCO and the role and function of auditors in the financial reporting environment, that there is a need to improve reporting assurance. Social audits pursued this endeavor but failed in practice due to the lack of specific regulations regarding it. Therefore, the need to develop a specific framework on social and incident audits is urgently needed.

Keywords: Auditor, financial sustainability reporting, sustainability services

Introduction

An assumption underlying the accounting process is that the reporting company will continue as a going concern and several researchers have the same opinion on the importance of this assumption (Hopwood et al., 1994). This means that an entity is considered capable of maintaining its business in the long term and will not be liquidated. Financial statements measure information about an entity's financial position and results of operations. The auditor's report adds a qualitative dimension to the information. The auditor is an intermediary between the provider of financial statements and the users of the report.

The issue of sustainability in accountability is mandatory when relying on business decisions to participate in nature conservation. There are important reporting requirements to support this accounting report, because it requires hard work and the role of companies that integrate accounting and the valuation environment into their work for the sustainability of their profession.

Sustainability accounting is an approach or method used in organizations to improve sustainability. Sustainable development was defined in 1987 by the United Nations Commission on Brundtland. One of the main challenges in accounting is sustainability, which starts with a lack of understanding of definition of sustainable development. Another challenge

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is that it is difficult to combine control and enterprise as the goal, because, as usual, usually as a corporate tradition, it must achieve profit maximization, so it can be seen as a capital investment of capital for the sake of understanding. While several studies have shown that sustainable business practices can catch up to promote greater long-term profitability, maintain a visible real relationship, and that agreement is important, both organizations need to consider factors that are considered increasingly important.

In the audit process, the auditor not only assesses the fairness of the presentation of the financial statements but is also responsible for evaluating the viability of the company. Auditors must decide whether they believe that the company will be able to survive in the future. This assessment can be done by evaluating the impact of each transaction that has a significant effect on the company's operational activities. The results of this assessment contain information that will be used as a reference in decision making by third parties, whether stakeholders, shareholders, and regulators.

In the current environment, to avoid the problems associated with the lack of stakeholders, satisfaction, the role of auditors plays a fundamental part. Rajan & Zingales (2001) show that better accounting increases the level of investment and growth in the country where it is applied. However, due to several financial scandals occurring in the past, auditing standards, and in particular, GC and GCO assumptions standards were revised to increase the requirements and attention of auditors. While these amendments contribute to increased transparency and stakeholder satisfaction and assurance, more work is needed regarding audit procedures for sustainability reporting. Indeed, the possibility for companies to achieve the SDGs by 2030 is subject to proper definition and implementation of audit procedures on sustainability reports.

Are all auditors ready for a change in a more serious assessment of the viability of the company? If it is based on regulations, then there is no word unprepared for the auditor profession. However, how will the implementation be in the field, if the infrastructure, the availability of human resources and most importantly the willingness and openness of the client to accept an assessment not only on the fairness of the financial statements, but also the viability of the company. This study aims to determine the opinion of auditors in non-capital Jakarta who in fact still have fundamental problems related to client non-compliance in the presentation of financial statements and consider auditing an administrative requirement only.

Theoretical Framework

1. Going Concern assumption: Academic and Regulatory Perspective

Going concern is the viability of a business entity and is an assumption in the financial reporting of an entity so that if an entity experiences the opposite condition, the entity becomes problematic. Going concern is also referred to as continuity which is an accounting assumption that predicts a business will continue in an indefinite period. The going concern assumption means that a business entity can maintain its business activities in the long term and will not be liquidated in the short term. The concept of going concern is defined by the Association of Chartered Certified Accountants (ACCA) as follows:

“The concept of going concern is an underlying assumption in the preparation of financial statements, hence it is assumed that the entity has neither the intention, nor the need, to liquidate or curtail materially the scale of its operations. If management conclude that the entity has no alternative but to liquidate or curtail materially the scale of its operations, the going concern basis cannot be used and the financial statements must be prepared on a different basis (such as the ‘break-up’ basis).”

Understanding the concept of going concern assumption means that there are also responsibilities of each related party, namely management and auditors. These internal and external parties must be able to realize their respective positions when dealing with the company's business continuity.

The going concern concept is particularly relevant in times of economic hardship and in some situations, management may determine that a profitable enterprise may not survive, for example because of significant cash flow difficulties. It is important to understand that it is the responsibility of management to make an assessment as to whether the use of the going concern accounting basis is appropriate, or not, when they prepare the financial statements. Meanwhile, from the auditor's point of view, as previously mentioned, it is not the auditor's responsibility to determine whether, or not, an entity can prepare its financial statements using the going concern basis of accounting; this is the responsibility of management. The auditor's responsibility in accordance with ISA 570 is to obtain sufficient appropriate audit evidence about the appropriateness of management's use of the going concern basis of accounting in the preparation of the financial statements, and to conclude whether there is a material uncertainty about the entity's ability to continue as a going concern.

GC is one of the most important underlined assumptions for the preparation of financial statements: several authors ((Hospodka, 2018; Moonitz, 1961) consider this principle an accounting necessity. Sapori (1970) asserts that the GC principle was introduced in the Middle Ages due to the repetition of trade trips, to allow continuity in business transactions. Indeed, GC is designed to influence an indefinite succession of transactions (Fremgen 1968), meaning that economic entities have an indefinite life in the environment. This conclusion has several implications for accounting; in fact, the accrual basis, the historical cost-based asset evaluation, the matching principle, the mechanism for allocating costs among different periods (i.e., for depreciation) are justified by the GC assumptions (Fremgen, 1968; Venuti, 2007). On the other hand, Sanders et al. (1938) although they consider GC as an important principle, they do not use it to justify the application of other accounting principles.

Other authors have criticized the GC assumption for its implicit weaknesses. In fact, many years ago, Edwards and Bell (1967) when the concept of GC conflict with the unstable environment and encountered problems if the old production cycle is modified in a fast cycle, placed in a dynamic business environment. However, although academics describe these considerations, accounting standards consider only two possible conditions over the life of the entity: GC and liquidation, wherein the latter is adopted only when there is no possibility of the entity to continue its activities for subsequent months. More deeply, the latest version of the Conceptual Framework for Financial Reporting (IFRS, 2018) asserts:

Financial statements are normally prepared on the assumption that the reporting entity is a going concern and will continue in operation for the foreseeable future. Hence, it is assumed that the entity has neither the intention nor the need to enter liquidation or to cease trading. If such an intention or need exists, the financial statements may have to be prepared on a different basis. If so, the financial statements describe the basis used.

The great consideration of GC assumptions is also confirmed by another set of rules issued by the Financial Accounting Standards Board (FASB), which in 2014 issued a special Accounting Standards Update (hereinafter ASU 2014) entitled “Presentation of Financial Statements”—Going On (Subtopic 205- 40). This confirms:

Under generally accepted accounting principles (GAAP), the continuation of a reporting entity as a going concern is considered as the basis for preparing financial statements unless and until liquidation of the entity is imminent. The preparation of financial statements under this assumption is commonly referred to as the going concern basis. When liquidation of an entity is imminent, financial statements

must be prepared under a liquidation basis of accounting in accordance with Subtopic 205-30, Presentation of Financial Statements- Liquidation of Accounting Basis

In addition, ASU 2014 stated that it is management's duty to evaluate whether certain events or conditions, which are considered as aggregates, may raise substantial doubt about the entity's ability to continue as a GC within 1 year after the issuance date of the financial statements. The update stipulates that there is substantial doubt when there are events that increase the likelihood that the entity will be unable to meet its obligations as they fall due within the period under consideration for the GC being evaluated.

The definitions summarized above demonstrate the relevance of GC assumptions across all legislation (under both, principles-based standards, and rules-based standards). Finally, clarification of management's duties is important to determine differences in terms of responsibilities for managers and auditors. Indeed, the auditor is called upon to verify the GC maintenance of the entity under investigation

What if the auditor is faced with a situation where he must meet the requirements in a going concern assessment? When faced with such a requirement, the auditor should be careful not to list general audit procedures, but rather to identify and highlight factors from scenarios that could call into question the entity's ability to continue as a going concern. Once these factors have been identified, the auditor should then be able to think of a procedure that can be adopted by the auditor to determine whether these factors constitute a going concern accounting basis in the circumstances, or not.

2. Sustainability Reporting in Indonesia nowadays

The implementation of Sustainability Reporting in Indonesia has received support from the Financial Services Authority and this form of support has also collaborated with various organizations that publish the Sustainable Financial Roadmap. This roadmap collaboration will encourage financial institutions to provide an injection of funds for sectors that support sustainability such as renewable energy, agriculture, infrastructure, MSMEs and others. The practice of Sustainability Reporting in Indonesia is driven by six factors, namely a sustainable financial roadmap, initiatives from the global business world, global reporting initiatives (GRI), integrated reporting, investor pressure and the SRI-Kehati stock index.

The trend of sustainability disclosure in Indonesian companies is still low (Harymawan et al., 2019). This happens because there are no standard regulations that require companies in Indonesia to issue sustainability disclosures such as the rules for publishing financial reporting to companies (Adriana & Uswati Dewi, 2019). According to previous literature, good corporate governance can influence companies to disclose their sustainability practices (Michelon & Parbonetti, 2012). Many of them understand that the costs that will be incurred by implementing sustainability will be a burden for the company. This is what drives innovation for companies to survive in the fierce competition in the modern world. Whereas stakeholders, commissioners, directors, employees must work together to create corporate value, which can then create innovations for sustainable purposes. Currently, the company has made innovations to the community through its corporate social responsibility program, which is a form of the company's concern for the community, and this has a significant impact on the company's survival (Amran et al., 2014). Companies can meet the information needs of stakeholders by disclosing corporate social responsibility activities, thereby indirectly providing assurance and trust to outsiders regarding sustainability (Hapsoro & Fadhillah, 2017). Sustainability is closely related to three things: profit, people, and planet (Palmer & Flanagan, 2016). Thus, sustainability requires more corporate innovation because the basis of sustainability is how a company is not only able to create profits for the company and can provide added value to the community through community awareness and empowerment programs, but also more importantly, how companies can contribute in the conservation of nature and the environment.

Research Method

This paper is qualitative descriptive research. This paper is described or painted facts or a visible condition or symptoms and describes or depicts the objects of the researchers based on facts that appear or are as they are. Research method is to conduct a literature research and interview on role of auditor when deal with sustainability service as the consequences of global financial crisis. This paper tried to illustrate the phenomenon of auditing sustainability reports in Indonesia. The method of data collection consists of literature research, interview, and observations.

The resource persons in this study are auditors and public accountants who have at least 5 years of experience in providing audit and assurance services. Some of the interviews were conducted online due to the COVID-19 pandemic situation, which although it was felt that it had subsided, some of the interviewees kept themselves from making direct contact. The advantage of using the semi-structured interview method, even though it starts with open-ended questions, allows the researcher to provide follow-up questions and elaborate on the main questions. The list of sources can be seen in Table 1 below.

Tabel 1
Source data demographic

No.	Name (disguised)	Position	Domicile	Audit experience (in year)
1.	DHN	Partner (CPA)	Denpasar	7 years
2.	AR	Partner (CPA)	Makassar	8 years
3.	WD	Partner (CPA)	Palembang	9 years
4.	EM	Supervisor Auditor (ACPA)	Denpasar	8 years
5.	AD	Supervisor Auditor	Denpasar	5 years

Research Analysis

1. Going concern and auditing standard: The Implementation

In the audit process, the auditor not only assesses the fairness of the presentation of the financial statements but is also responsible for evaluating the viability of the company. Auditors must decide whether they believe that the company will be able to survive in the future. This assessment can be done by evaluating the impact of each transaction that has a significant effect on the company's operational activities. An assumption underlying the accounting process is that the reporting company will continue as a going concern. This means that an entity is considered capable of maintaining its business in the long term and will not be liquidated. Financial statements measure information about an entity's financial position and results of operations. The auditor's report adds a qualitative dimension to the information. The auditor is an intermediary between the provider of financial statements and the users of the report.

The term going concern can be interpreted in two ways, the first is going concern as a concept and the second is going concern as an audit opinion. As a concept, the term going concern can be interpreted as the company's ability to maintain its business continuity in the long term. As an audit opinion, the term going concern indicates that the auditor has doubts about the company's ability to continue its business in the future.

Various auditor problems in the regions

The implementation of this going concern opinion can be seen in the audited financial statements of publicly listed companies and state-owned enterprises, most of which are based in big cities in Indonesia. How is it applied in non-big cities? Has this going concern issue also touched non-go public companies and what about the services provided by auditors in non-big cities? The questions that are sub-sections of the big questions of this research are answered in the following excerpts of interviews with various sources.

Regarding the external auditor's role in sustainability reporting, DHN, who is the youngest public accountant among the speakers in this study, gave his views to researchers based on his experience so far.

“The concept of sustainability reporting is good. It's just that many businesses will not be able to afford it, especially those that are small and still funded by bank loans.” (DHN)

DHN, who has been working in the audit services world for a long time, who started his career as an auditor until now is able to open his own public accounting firm in Denpasar (Bali), sees and understands that in the field, companies are still experiencing difficulties in capital, instead of implementing the concept of sustainability until now. carry out sustainability reporting. This affects the services provided by DHN for its clients.

“During my practice, I have never given a going concern opinion to a client because I feel it is not necessary. The client also only knows whether his opinion is unqualified. At the most extreme, I gave an unfair opinion” (DHN)

Considering the problems of clients in the regions as stated by DHN, there are still capital constraints in their business, so it can be said that they are not ready to implement sustainability services. The same thing was expressed by WD who practices as a public accountant in Palembang, West Sumatra. WD feels that the same problems faced by its clients are not only the problem of capital to maintain their business, but also the limited ability of their human resources to produce financial reports that are in accordance with generally accepted accounting standards.

“If we are in this area, we are grateful to get a client whose audit only makes conditions for tenders. Having a financial report, at least a balance sheet and profit and loss, we are happy public accountants. We cannot expect more from them to make reports other than financial statements. For them it will add to the burden of costs.” (WD).

Public accountants who are domiciled in the regions provide more services related to auditing financial statements. When asked about their views on readiness to provide sustainability services, WD feels that they are not ready for this, as excerpted from WD's views below.

“Personally, I admit that I have never attended any training or certification such as the Certified Sustainability Reporting Assurer (CSRA). So, it's not ready to provide Sustainability Service yet.” (WD).

For WD, obtaining Sustainability Reporting examiner certification such as CSRA is very important as capital to be able to provide sustainability services, especially for auditors who feel they are ready to provide opinions regarding the business continuity of the clients being audited, in addition to the main services of auditing financial statements. Especially for auditors who issue opinions related to business continuity.

Implementation in the field is indeed still unique because the problems faced by clients of public accounting firms in the regions are still focused on the problem of data availability to support audits of financial statements, audits that are still considered as administrative requirements, weak literacy regarding business continuity, and problems of difficulties. capital owned by clients of local public accounting firms. The findings from this interview provide information that the client's situation also has an impact on the services provided by auditors through public accounting firms in their respective regions.

If the audit is still an administrative requirement, is it possible for a CPA firm to provide sustainability services?

The complex is more complicated because the scope description and related site selection decisions can be very helpful in assessing some clients to limit the scope and eliminate certain areas from the examination. In the case of clients in the regions, public accountants who pay through their answers summarized in interviews face the fact that audit reports are an administrative requirement for credit to banks, participating in tenders and the entry of new investors to show the 'face' of their good company - fine. For example, a client may only want assurance in areas that can demonstrate positive performance; hence, the importance of assessing data trends carefully.

“Some of my clients do not understand well the purpose and intent of our external audit. Don't expect them to realize the importance of business continuity or make a sustainability report, if the problem of understanding this audit has not been resolved.” (AR)

There is a pessimistic feeling shown by AR who practices as a public accountant in Makassar for 8 years, that there is no significant development of his clients' understanding of the actual audit. From his statement, AR does not believe that sustainability services will be possible to be provided in his area if the characteristics of his clients still consider auditing to be not too important.

"I have 1-2 clients, who openly ask for a clean opinion because the company is borrowing money from the bank and says that the audit report is only a requirement, and the bank also asks that the opinion be without exception." (EM)

There is a lot of homework that local auditors need to complete, especially their efforts to keep educating their clients about the true understanding of financial statement audits. They understand that business continuity is a matter that must be the main concern when carrying out their audit procedures and their assessment of the client's business continuity becomes a very important point for introspection from their clients. However, what happened in the field was the opposite. They continue to do education while providing services and their hope is that they can 'level up' in providing services other than auditing financial statements, which is related to sustainability services.

2. Role of auditor: Going Concern during Audit Process

Several world scandals that have occurred, namely Enron, WorldCom, Lehman Brothers, Global Crossing and Permalat, as well as cases that occurred in Indonesia such as Garuda and SNP Finance, should serve as lessons for the business world and awareness of the important role that auditors have. Companies that are still classified as private sector and MSMEs do not have a complex accounting and internal control system like go public companies, but they need to think about the survival of their companies in a way that adapts to their situation and

conditions. Auditors and public accountants have an important role as external parties who help maintain the health of the company.

Indeed, Statement of Auditing Standard 570 concerning “The auditor's consideration of the entity's ability to continue as a going concern” establishes the auditor's responsibility “to evaluate any substantial doubt about the entity's ability to continue as a going concern for a reasonable period of time, not more than one year beyond the date of the audited financial statements.” This is based on Statement of Auditing Standards No. 570 issued by the Indonesian Institute of Certified Public Accountants which took effect on January 1, 2013 for issuers and January 1, 2014 for entities other than issuers, and disclosure of GC has been included in the bankruptcy law in Indonesia, which can be found in Articles 179 – 184 of Law Number 37 Year 2004 concerning Bankruptcy and Suspension of Debt Payment Obligations. In addition, the Suspension of Debt Payment Obligations (PKPU) in principle has adopted the principle of business going concern itself, because the debtor is still authorized to take action to manage his assets as long as it is with the approval of the management. That is, PKPU is an application of the business going concern itself. The going concern assumption is also found in generally accepted accounting principles in Indonesia.

Following Audit Standard 570:

- The auditor shall verify whether the results obtained by performing audit procedures and considered in the aggregate indicate possible substantial doubt about the entity's ability to continue as a GC for a reasonable period. Any doubts there must be supported by appropriate audit evidence and potential mitigating factors to properly evaluate the auditor's doubts;
- In the presence of substantial doubt, the auditor should obtain information about management's plans and evaluate the possibility of actually implementing them;
- After evaluation of management's plans, the auditor shall assess the conclusion that there is substantial doubt about the entity's ability to continue as GC. When auditors conclude that there is substantial doubt, they should assess the adequacy of disclosures about the entity's inability to continue its activities for a reasonable period and join the paragraphs in the audit report on their conclusions. When auditors conclude that there is no substantial doubt, they may evaluate the need for disclosure of this information in the audit report.

On the other hand, as indicated by the Accounting Standard, ISA 570 (revised) considers the possibility of a management plan that can reduce doubts. The auditor should evaluate these plans, the likelihood of their effective implementation and their impact on events and conditions that give rise to substantial doubt. However, the level of testing and verification performed by the auditor in all these cases is related to the history of the previously evaluated entity. As highlighted by Mock et al. (2013) during the period following the 2008 financial crisis, regulators and others questioned the value of current audit reports and requested improvements in their audit reports. For this reason, standard setters and regulators are adopting a series of innovations to increase the level of transparency and reliability of audit report content. Among these, the most important novelty provided by the revised version of ISA 570 combined with ISA 700 (“Forming Opinion and Financial Reporting Statements”) is the provision of certain paragraphs in the assessment of information audit reports relating to the maintenance of GC assumptions.

In conclusion, a brief description of GC assumptions in auditing standards emphasizes its relevance during auditor verification to protect all stakeholders from harm and to prevent another scandal in the financial markets.

3. Consideration from previous literature: Role of Auditor in Prevent Damages for Investors

Auditors have an important role in ensuring reliable financial reporting. As in the events mentioned in the previous paragraph, when the auditor deviates from the principle of independence and, more generally, from professional requirements, the loss in the environment can have a considerable impact on all stakeholders and more generally, for the achievement of sustainable economic growth. required by the SDGs.

In explaining its mission, the Conceptual Framework for Financial Reporting (IFRS) (2018) are among the users interested in a transparent and trusted accounting language, with reference, investors. In the public interest, trust, growth, and long-term financial stability in the global economy are made possible by reliable financial disclosures that help investors make informed decisions to allocate capital. DeFond et al. (2002) underscore the important role that audit reports play in providing warnings of situations of financial distress and GC issues. Also, Church et al. (2008), investigated the literature prior to 2007 on the value relevance of audit reports, in concluding that they convey little information to users, including GC reports among market-relevant information. More generally, Christensen et al. (2014) in their research on the impact of audit reports containing Critical Audit Matters-paragraph (CAM-paragraph) showed that this type of disclosure, when it represents significant uncertainty, encourages investors to stop considering the company as a possible investment.

However, although GC audit disclosures can be included among CAMs, there are separate regulations for GC audit reports (both under PCAOB and IAASB) standards). These considerations are the basis for clearly motivating increased research on the value relevance of GC reports for investors and more generally, for stakeholders.

Bédard et al. (2018) found that GC audit reports cause market reactions only by the presence of weaknesses in GC disclosures in financial statements. Myers et al. (2018) discussing the existence of a confounding effect when GC modifications are issued with earnings announcements concluding that the informational benefits of reporting GC modifications are significantly smaller than previously thought. Therefore, also considering recent research on this issue, Bédard et al. (2016) the conclusions about the need to increase the level of information contained in audit reports remain valid.

4. Moving Forward through The Social Audit

Based on this study, social auditing is a series of processes within an organization to assess and report on economic, social, and environmental aspects. Social auditing is a term used in measuring the social performance of an organization. So social auditing is not a separate auditing science but rather a form of evaluation or monitoring of the social impact of a policy or organizational activity which will be outlined in the form of a social report. The presentation of the social report can be part of the annual report or a separate report. The social report itself will later be verified or assured by external parties to maintain the credibility of the report so that it can be used by stakeholders.

The scope of social auditing broadly covers the internal social aspects of the organization and the external social aspects of the organization. Internal aspects of the organization include, among others, human resource management, occupational health and safety, organizational change, environmental and natural resource management. While the external aspects of the organization include, among others, local communities, business partners, suppliers, consumers, human rights, and global environmental concerns. When using the global reporting initiative approach, the scope can be grouped into economic, social, and environmental aspects.

The benefits of social auditing are of course to assess how far the impact of the organization's social performance on stakeholders. In addition to being used as a report to stakeholders, social auditing is also useful for organizations in further improving social performance so that it is a continuous process.

Following Bowen (2013) definition, and the general meaning of audit, (as a series of verifications carried out by an external and independent individual (or group of individuals)), doubts arise about the respect for auditor independence. For this reason, there is a need to define more rules. Some authors draw social audit close to financial audit. Chapple & Mui (2015) try to apply the established responsibility regime for financial audits also in the case of failed social audits. Indeed, they define a social audit as the “non-financial equivalent of” an audit of general-purpose financial statements and the results of both reports (i.e. disclosure and audit) are made generally available by the client firm that commissioned them.” Even if this juxtaposition of ideas seems correct, Adams & Evans (2004) conclude that social audits are completely different from financial audits for several reasons: Social auditing is not a legal requirement, there is no set of rules to be respected, stakeholder interests are interested in social audits. reports can contrast between them, and much of the data adopted in social reports is qualitative rather than quantitative. All these considerations are fundamental to determining the specific set of rules and requirements for sustainability reports, which can represent the basis for developing a specific framework as well as for conducting useful and relevant social audit procedures.

Final Remarks and Conclusion

As known, auditing plays a fundamental role in the contribution to realize reliable and truthful financial reporting disclosures. Even if it is not able to prevent directly financial losses, it can help stakeholders to take more safety decisions to decrease damages to them and to the environment. Especially considering the current economic situation and the additional demand to improve sustainable development through greater accountability and good governance (as highlighted during the debate on SDGs), the attention to audit procedures, and the possibility to adopt them in other situations, arise.

On the other hand, disclosures relevant to stakeholders are also represented by sustainability reports. Albeit their diffusion in recent years is evident and in line with the requirement of SDGs, its application is not regulated properly. Indeed, literature cited in this chapter shows as some regulators tried to define legal requirements for social audit, however without a correct implementation. Moreover, at this stage, social audit received several criticisms among academics. All these issues clearly display the necessity to define more rules on that discipline and in a concrete manner. As shown among the chapter, transferring rules from financial audit to social audit is not possible due to differences between these two practices. Sustainable economic growth starts from proper use of different resources in each organization, passing across sustainable reporting procedures to conclude with a specific set of rules to control the respect of the requirements of SDGs. Finally, there is the necessity to develop more precise rules to standardize sustainability reports. Only in this way will be the possibility for regulators a concrete definition of a specific set of guidelines to perform useful procedures of audit on these reports.

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Building Partnership or Competition : Village Business Sustainability

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Abstract

Purpose — *This study aims to understand the reality of Village-Owned Enterprises and their implications for rural communities. The focus of this research is to explore the role of Village-Owned Enterprises in carrying out their role as an engine for driving the economy of people in rural areas. Village-owned enterprises have turned into competitors for small rural enterprises.*

Design/methodology/approach — *This research uses a qualitative approach and the informants from Village-Owned Enterprises are the Chairman, Secretary, and Treasurer. Village-owned enterprises become a medium for rural business groups to develop economic potential.*

Findings — *The results of the study indicate that the business fields that village-owned enterprises develop have in common with small businesses of rural communities, so it interferes with the sustainability of local communities businesses.*

Practical implications — *Provide academic considerations for regulators to evaluate and reorganize the role of Village-Owned Enterprises for the sustainability of small rural businesses.*

Originality/value — *The development of Village-Owned Enterprises is based on building a business chain by involving local economic groups so that the sustainability of community economic business activities impacts the economy of rural areas.*

Keywords: *Village-Owned Enterprises, Partnership, Competitor, Village Economy, village business sustainability*

INTRODUCTION

Rural areas have gradually changed for the better since the law on villages Number 06/2016 began to be implemented by the government in Indonesia. Several aspects of rural areas have improved, such as the availability of village infrastructure. The community uses village roads to facilitate the mobilization of socio-economic activities. Other public facilities, such as agricultural roads for harvesting produce distribution, are also focused on improving the village government's support of food security (Indraningsih et al., 2021; Zaman et al., 2021). In addition, empowerment and development programs for rural communities are part of the government's attention in implementing human development and social-culture in rural areas (Hariyanto, 2022).

Community economic empowerment based on local village potential is one of the government's orientations to promote the economy in rural areas, such as the development of tourist villages (Trisnawati et al., 2018) and home industry businesses (Raharjana, 2012). The government encourages the

formation of village business units or other designations such as Village-Owned Enterprises to become economic institutions for rural communities. Village-Owned Enterprises are business units with legal entities that receive initial capital from the village government to drive the village economy (Karim et al., 2021). The government hopes that Village-Owned Enterprises can become an engine that drives the economy in rural areas. Therefore, the government encourages every village to have a Village-Owned Enterprise in Indonesia. Data on the development of the number of Village-Owned Enterprises continues to grow from year to year as shown in the following data.

Tabel 1. Data on the Development of BUMDes in 2014-2018

Year	Number of Village-Owned Enterprises	Ratio
2014	1.022 Units	1.4 %
2015	11.954 Units	16.1%
2016	18.466 Units	24.9%
2017	39.149 Units	52.8%
2018	45.549 Units	61.5%

Data source : Village ministry

The number of Village-Owned Enterprises has increased from 2014 to 2018. In 2018 the number of Village-Owned Enterprises reached 61.5%, and 38.5% of village areas do not yet have Village-Owned Enterprises. The increase in village-owned enterprises spread across all villages in Indonesia should have encouraged increased economic activity in rural areas.

Village-Owned Enterprises' capital comes from the village government's capital participation. The village government's capital participation follows the village law, which stipulates that the village budget can be used for investment activities in Village-Owned Enterprises. Investment in Village-Owned Enterprises so the village government can stimulate community economic activities through the village business unit.

Village-Owned Enterprises are not just economic institutions but have a Social Enterprise dimension (Muryanti, 2020). The definition of Social Enterprise means that Village Owned Enterprises prioritize rural communities' economic interests rather than institutions' economic interests. Village-Owned Enterprises have social enterprise characteristics and are different from profit-oriented private enterprises. Prioritizing the community's economic interests is a representation of the implementation of Social Enterprise in Village-Owned Enterprises (Setiawan et al., 2021).

In contrast to Village Owned Enterprises, small businesses managed by rural communities, such as trading businesses and home industries, operate with limited capital. Capital constraints and limited use of the latest technology make small businesses owned by villagers face many business obstacles. Marketing local products' reach is a fundamental obstacle for small businesses in rural areas. The distribution network of local products from the village to the market center is still experiencing difficulties, so the optimization of sales of small business actors in rural areas has not been achieved as it should. This situation makes local village businesses have not developed

optimally, so they have not made a significant contribution to the family economy and rural economic independence.

Village-Owned Enterprises and small business actors run similar businesses and operate in the same area. The similarity in the business fields between the two causes business competition and unfavorable disruption for local business actors. The similarity of business fields creates a sharing market that leads to business competition between Village Government Owned Enterprises and small businesses owned by villagers. Village-Owned Enterprises with the initial goal of becoming a driving force for the community's economy have turned into competitors for micro-enterprises owned by villagers.

Restricting the problem

This study focuses on the role of Village-Owned Enterprises located in the Bandung Regency area in carrying out their role as an engine for driving the economy of the community in rural areas.

Research question

How is the reality of the business practices of village-owned enterprises and their implications for the sustainability of small rural business.

Research purposes

It understands the business reality of village-owned enterprises and their implications for the sustainability of small rural businesses.

LITERATURE REVIEW

Relevant Theories and Research Results

Village-Owned Enterprises are economic institutions that aim to improve the village economy. Economic institutions belonging to the village government have the authority to manage the village's potential to improve the rural economy. Village-Owned Enterprises have the authority to manage village economic potential for the benefit of rural communities. Village communities have an economic interest in Village-Owned Enterprises, so this economic institution should apply the sharing economy principle. The sharing economy view means that the community keeps the main priority in providing economic benefits.

Community-based development is a model that provides opportunities for the community to participate in rural development (Dewi et al., 2013). The participation of community elements in village business development can encourage a sense of shared responsibility. According to Timothy (1999), community participation in business development is divided into two perspectives: first, local community participation in the decision-making process. Second, community participation participates in developing and enjoying the benefits of the existence of Village-Owned Enterprises.

Community participation in village business development aims to safeguard the community's interests in the activities of Village Owned Enterprises. Adiyoso (2021) stated that community participation in the development of Village-Owned Enterprises is an effort to empower and create economic growth in rural areas. Thus, the awareness of all parties in

strengthening community participation in rural local economic development is essential, especially for village-owned companies to consider.

Community participation is an element of rights that every villager should be able to enjoy properly. The community is not only an object that receives development benefits but also has the capacity as a subject, namely, part of the implementer of development. Ito et al. (2018) argues that community participation is a right or subject, not an obligation. Community involvement in rural economic development is part of the rights that Village Business Entities need to pay attention to for the sustainability of rural businesses.

Research Methodology

Types of research

Rural economic exploration focusing on the economic activities of Village-Owned Enterprises and household-scale micro-enterprises is an effort to understand the economic reality in the rural environment. Understanding rural socio-economic realities require a methodology that can critically parse the actual situation in the socio-economic activities of the community. In this context, this study uses a critical qualitative approach by trying to understand the economic activities of village business entities that potentially have negative implications for household-scale micro-enterprise activities in rural areas.

Sources Empirical data comes from the Village Community Empowerment Service, Bandung Regency Government. The data is from Village Business Entities profile data operating in Bandung Regency until 2019. This secondary data contains quantitative information that researchers will use to enrich the analysis and understand the economic reality of Village Owned Enterprises. In addition to secondary data, this study also uses qualitative data obtained by researchers through direct observation so that researchers obtain information directly from visible facts.

Researchers conducted field observations on Village-Owned Enterprises "Mandiri" and Village-Owned Enterprises "Mandalamekar." At this stage, the researcher made direct observations of the business activities of the two business entities. Direct observation aims to obtain direct information on the reality of how the "Mandiri" Village-Owned Enterprises and "Mandalamekar" Village-Owned Enterprises carry out business activities in rural areas.

Informant

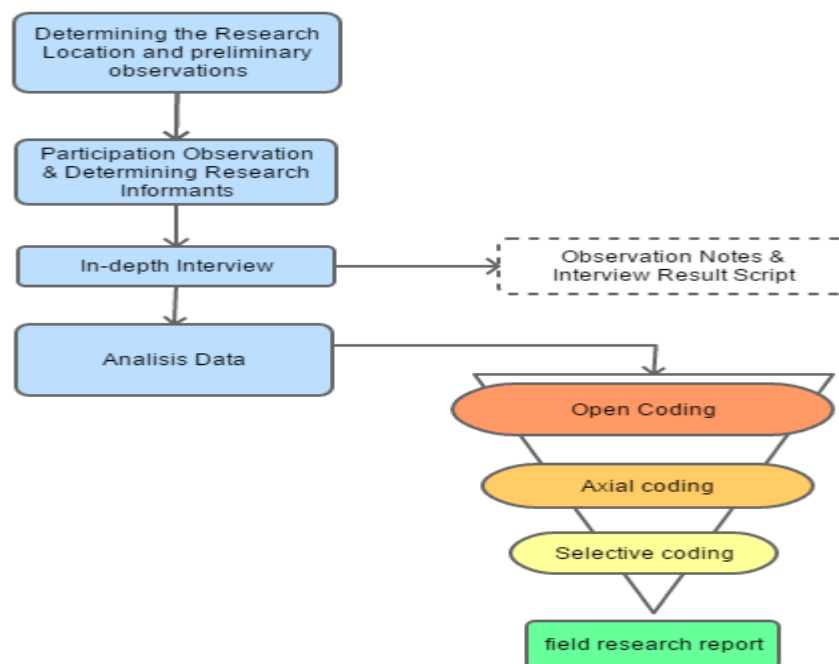
This research method uses data collection through direct observation techniques and in-depth interviews. Researchers conducted in-depth interviews with village business entities based on the Village Head's Decree on the Structure of Village Owned Enterprises Management. The management of the Village-Owned Enterprises consists of the Chairperson, Secretary, and Treasurer. The interview method uses depth interview techniques or unstructured interviews that researchers use to obtain more in-depth information about the economic activities of Village-Owned Enterprises.

Data analysis

Interview data scripts are material for researchers to conduct a research analysis. Analysis technique with Open Coding is a stage where researchers try to find and classify certain concepts or themes in the interview scripts. In the next stage, the researcher tries to understand each theme from several groupings of interview scripts. In data analysis, this process is an open coding analysis stage. Each theme is then described in more detail into specific sub-themes by applying open coding analysis. In the context of this research, the sub-theme relates to the facts of managing village-owned enterprises.

The results of the description of the theme became sub-themes. The researchers combined all the information to find an interpretive view of the reality of the management of the "Mandiri" Village-Owned Enterprises and "Mekarmanik" Village-Owned Enterprises. The interaction of sub-themes with other sub-themes in Selective Coding Analysis becomes a series that will form a relationship pattern and become a causal relationship with logical reasoning. This analytical tool is a researcher's effort to produce a proposition grounded through exploring phenomena to understand the noumena.

Figure 2. Field Research Procedure



FIELD FINDINGS

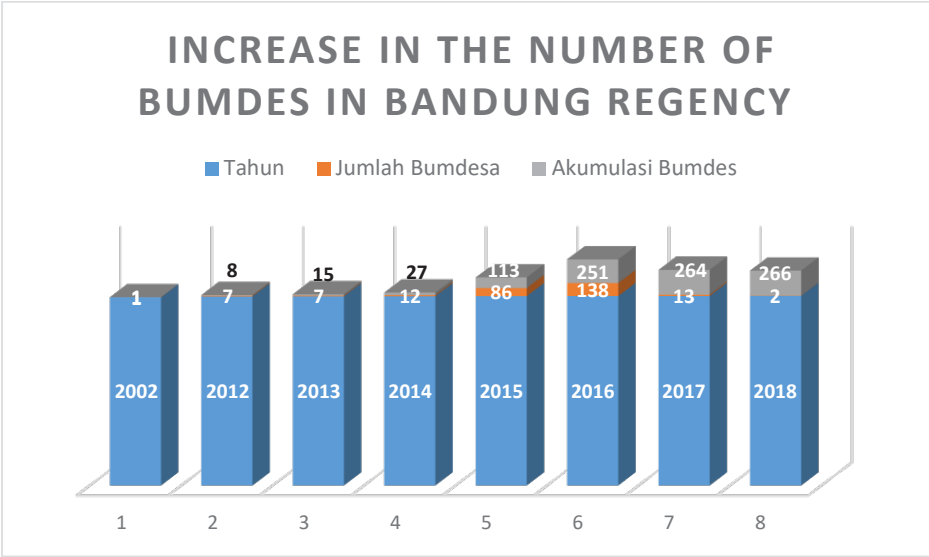
Research Site Profile

The establishment of Village-Owned Enterprises is part of the village community empowerment activities. Village-Owned Enterprises obtain working capital from the village government and are part of village community empowerment activities. Capital participation from the village government aims to empower the economy of rural communities through Village Owned Enterprises and social enterprises (Widiastuti et al., 2019). Village funds from

the central government to the village government continue to flow to the village so that the existence of the Village-Owned Enterprises institution can have implications for improving the economy in rural areas.

Empirically, data on village-owned enterprises spread over the Bandung district has increased in quantity. The number of Village-Owned Enterprises increased from 1 unit in 2002 to 266 units in 2018. This number continues to increase in line with government policies that require every village government to form a Village-Owned Enterprise in Indonesia. Village-Owned Enterprises are the engine of the economic sector of rural communities.

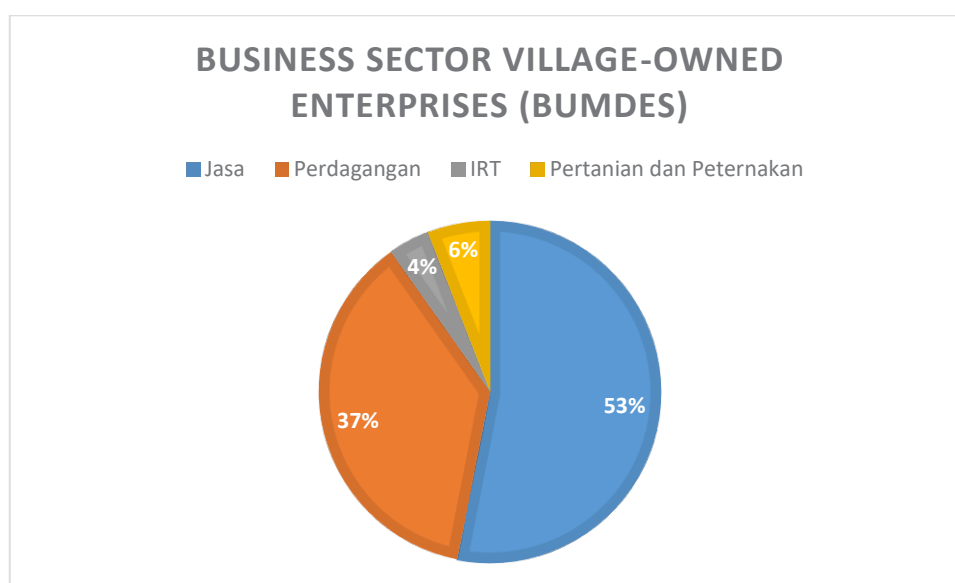
Infographics 1. Number of BUMDes in Bandung Regency in 2018



Data source: DPMD Kab. Bandung

Village Business Entities spread over rural areas in Bandung Regency are engaged in the business sector with varied business fields. Service businesses, trade, home-scale industries, agriculture, and livestock sectors are the business sectors of the Village Business Entity. Businesses in the service sector, such as renting chairs and tents, sports arena buildings (GOR), clean water management, savings and loans, and managing village tourism objects, are several types of businesses from village-owned enterprises. The trading sector, such as village stalls, selling necessities, gas businesses, office stationery, and photocopies, is a form of trading from the Village Business Entity. Other Village Business Entities are engaged in selling agricultural fertilizers and distributing building materials. The household-scale industrial sector (IRT), including the manufacture of handicrafts, the culinary industry, and convection, is part of the Village Business Entity. The last sector of the Village Business Entity's business is the business of breeding and cultivating mushrooms, as well as fattening sheep. The business sector infographic of the Village Business Entity is shown in the following image.

Infographics 2. village-owned enterprises Business Sector



Data source: DPMD, Bandung Regency

Discussion

Village business entities are engaged in several business fields. This situation makes village business units resemble holding companies by engaging in several business sectors. The business in the village business unit differs from that in the private business sector. Village business entities are social enterprise institutions, while private businesses are profit-oriented to accommodate stockholder interests. Social enterprise institutions place village communities as stockholders in managing village business entities. Village business entities accommodate the community's economic interests beyond their economic interests. They are prioritizing profitability for rural communities while improving the internal performance of the village business entity itself. Therefore, the management of village business entities needs to make business decisions to place village communities at the forefront of goals.

However, the Village Business Entity is engaged in several business fields, as shown in the infographic (Figure 4), indicating that the community has not yet received the central position and economic benefits. The village business entity runs the service business and general trade, similar to a small community business, giving rise to business competition between the two. The formation of village business entities that should be the engine of the rural economy has become a competitor for small business actors to seize the local market. Village-owned small businesses compete with village government-owned enterprises because they run similar businesses. Without realizing it, village business entities position themselves as competitors, disrupting the sustainability of small businesses in rural areas.

Village-Owned Enterprises and small businesses owned by rural communities have different sources of capital. Several studies reveal that

community micro-enterprises are sourced from internal household funding (Atika & Sukoco, 2019; Riawan & Kusnawan, 2018; Chakraborty et al. 2021). Some business actors convert family savings funds into household-scale business capital. The capital element is one of the causes that make it difficult for a household-scale business to develop. On the other hand, Village-Owned Enterprises labeled as formal legal entities obtain village government capital participation, making it very easy for managers to operate businesses. The village-owned enterprise capital from the government does not necessarily make the business unit perform well, especially concerning the rural economy's size.

The application of social entrepreneurship in Village Owned Enterprises has not resembled the actual situation. The nature of social enterprise in Village Owned Enterprises means building partnerships with micro business groups to improve rural communities' economies. Supposedly, village-owned enterprises become a medium for rural business groups to develop the economic potential of rural communities. Small business groups become partners for Village-Owned Enterprises to build the economic independence of rural communities.

However, the actual situation is not yet so; village-owned Enterprises run businesses similar to business activities owned by villagers, which have been the economic base of local communities' households. Village-Owned Enterprises have become competitors, thus disrupting the sustainability of small rural businesses. Ideally, Village-Owned Enterprises become economic partners for rural community economic groups because of their position as the driving force for the rural economy. However, it is still not running as it should. The existence of Village-Owned Enterprises in certain village areas has not shown sustainable economic development for rural communities. Village funds play more of a role in encouraging the increase in the number of Village-Owned Enterprises but have not been able to provide an impact on the rural economy (Arifin et al., 2020).

CONCLUSION

The sustainability of rural-based small businesses is a priority to build economic independence in rural areas. Village-Owned Enterprises have a strategic role in realizing these expectations, so the management needs to evaluate business activities not to create competition with local small business actors. Returning the role of Village-Owned Enterprises to its initial role is an effort to maintain the stability and sustainability of rural economic business groups. Village-Owned Enterprises are the economy's pillars and become the rural economy's engine.

The manifestation of *soko guru* in village economic activities encourages Village-Owned Enterprises to build economic synergy and work together (simultaneously) with village business groups. Village-Owned Enterprises focus on building business links by involving community groups based on the rural economy.

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Circular Economy Approach for ASEAN's Clean Energy Transition: New Opportunities and Challenges after the COVID-19 Pandemic

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Abstract. Many researchers and practitioners focused on renewable energy development are looking to innovate business models to find new ways to create and leverage value from circular economy approach. The main concern is to address the challenges and inefficiencies in the energy transition. In business, such inefficiencies are referred to as bottlenecks. However, the enormous potential of circular economy approach and business model innovation to overcome obstacles in the energy transition has not been widely researched, especially in the case of ASEAN. This paper contributes to filling this gap. It appears that circular economy approach facilitates business model innovation that overcomes barriers to integrating renewable energy technologies into incumbent structures or barriers associated with the independence of renewable energy technologies from established structures. Furthermore, business model innovations to address these bottlenecks can be incremental or transformative. As a result, business model innovations based on a circular economy approach appear in three types. Each type triggers new recommendations for research and practice of business model innovation and governance of renewable energy transitions.

Keywords: *ASEAN; Circular economy; COVID-19; Energy transition; Sustainability*

**CLIMATE CHANGE VULNERABILITY TO PADDY PRODUCTION
IN BALI, INDONESIA
(Replicated Article Given)**

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ABSTRACT

Indonesia is one of the countries most vulnerable to climate change. The damage caused by the impacts of climate change is already evident in Indonesia. The combination of high population density and high biodiversity, the existence of islands with more than 15,000 islands and a coastline of tens of thousands of kms, makes Indonesia one of the countries most vulnerable to the impacts of climate change. Bali, as a small island in Indonesia, is likely to be affected by climate change which has an impact on various aspects such as rising sea levels, drought, flooding, and rice production. Some evidence suggests that rainfall patterns have changed according to data between 1951 and 2000 (Badan Meteorology, Climatology and Geophysics (BMKG), 2010). The start of the rainy and dry seasons is delayed or even more advanced, depending on the location. This paper aims to show how vulnerability assessment areas in Bali were identified based on a variety of studies including literature reviews, statistical studies, stakeholder/policy studies and interviews with farmers. The method used is an analytical descriptive approach and maps related to the study. This study includes three sub-components needed in each climate change vulnerability, namely exposure, sensitivity and adaptive capacity. The exposure study is based on climate data from BMKG, such as annual rainfall, temperature and humidity. Data on the location of paddy is used as an element of sensitivity. Assessment of adaptation capacity uses a normative approach to determine paddy production, which is a combination of qualitative and quantitative techniques. The results of this study show how adaptation efforts should be applied to deal with paddy production with climate change. Farmers in Bali should be supported with appropriate adaptation measures based on well-focused vulnerability assessments.

**Keywords: Climate Change, Vulnerability Assessment, Rice Production, Descriptive Approach
Analytical**

COMMUNITY BASED TOURISM (CBT) AS AN EFFORT TO ACHIEVE SUSTAINABLE DEVELOPMENT GOALS (SDGs) OF VILLAGES

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ABSTRACT

This study aims to describe the implementation of the concept of *Community Based Tourism* (CBT) as an effort to achieve the *Sustainable Development Goals* (SDGs) of villages. This research uses qualitative research methods, with a case study approach. The object of Pandansili Tourism research managed by pokdarwis, village communities, BUMDes, and the Ngampungan village government of Jombang Regency, Indonesia. The method of data collection uses interviews, documentation and observation. The data analysis technique was carried out using the stages of data collection, data reduction, data presentation and conclusion of the research data. The results of this study found that the development of *Community Based Tourism* (CBT) has made local communities the main figures in developing and managing Pandansili tourism. The contribution of Pandansili Tourism has helped meet the indicators of the Type of Economic Villages Growing Evenly in the *Sustainable Development Goals* (SDGs) of the Village. So far, several indicators of the type of Economic Village For Even Growth have been achieved, such as the decline in the level and the increase in visitors to Pandansili Tourism every year.

Keywords: Community Based Tourism (CBT), Pandansili tourism, Village Sustainable

Development Goals (SDGs).

INTRODUCTION

The SDGs are an international development program with 17 goals divided into 169 goals. In 2020 the Ministry of Pdt issued a derivative program from international SDGs to village

SDGs with the aim of creating equity and development in Indonesia. The village SDGs also add one goal out of the seventeen goals contained in the international SDGs. The SDGs are the main reference for the medium-term development of villages throughout Indonesia. The SDGs have proven to make it easier to measure development and development.

Community Based Tourism or CBT is a form of tourism that seeks to empower the community to manage tourism growth and achieve community aspirations related to community welfare including economic, social, and environmental. CBT is a tourism activity owned, operated, and managed or coordinated by the community as an effort to prosper the community by supporting sustainable livelihoods and protecting valuable socio-cultural traditions, natural heritage and existing resources [1]

Every development of tourist destinations is developed by adopting content that reflects the values of local culture and community as well as local wisdom including in developing tourist attractions and tourist facilities.

According to Suansri (2003:21-22) in [4] *Community Based Tourism* (CBT) has dimensions, namely:

1. Economic dimension: the existence of funds for community development, the creation of jobs in the tourism sector, the emergence of local people's income from the tourism sector.
2. Social dimension: improving the quality of life of increasing community pride, fair division of roles between men, women, young and old generations, and building organizational strengthening.
3. Cultural dimension: encourages people to respect different cultures, helps the development of cultural exchanges, as well as the culture of development is closely attached to the local culture.
4. Environmental dimensions: studying *the carrying capacity of the area*, regulating waste disposal, increasing awareness of the need for conservation.

The basic principle of community-based tourism is to place the community as the main actor through community empowerment in various tourism activities so that the benefits of tourism development are intended for the community and improve the welfare of the local community.

CBT has several principles, namely involving and empowering the community to ensure transparent ownership and management; build partnerships with relevant stakeholders; obtaining a recognized position with the relevant authorities; improving social welfare and the maintenance of human dignity; include a fair and transparent profit-sharing mechanism; improving local and regional economic linkages; respect for local culture and traditions; contribute to the conservation of natural resources; improving the quality of the visitor experience by strengthening interaction between hosts and guests; work towards economic independence. [1]

The Ministry of Pdt localized the International SDGs into Village SDGs which were dilators behind the direction of President Joko Widodo. The village is the smallest space with the complexity of socioeconomic issues. In some phenomena, the facts prove the village to be the most resilient social entity, the most powerful from the crisis, and have stronger socioeconomic resilience than the city. In terms of territoriality, based on data released by the Ministry of Home Affairs (2019) in [2] rural areas reaching 91% of the total territory of Indonesia.

Indonesia has more than 80,000 villages spread from Aceh to Papua provinces. The Central Statistics Agency (BPS) noted that in 2019 the number of villages/kelurahan in Indonesia was 83,820 villages. Some of the villages spread across Indonesia are tourist villages. The number of tourist villages listed in the results of the plan announced on August 19 is 1,831 villages.

The Ministry of Culture and Tourism (2018) in [5] mentioned that a tourist village is a village that has its own charm (it can be in the form of the physical uniqueness of the rural environment, as well as the socio-cultural life of its people) which is packaged naturally and attractively.

According to [6] in its development, tourism villages can be formed with three management institutions based on the empowerment of the surrounding community, namely:

1. Tourism Awareness Group (Pokdarwis): this group was formed based on the agreement of the surrounding community known to the Village Head and confirmed by the Head of the local Tourism Office as a driver of tourism awareness activities and the implementation of Sapta Pesona.
2. Cooperatives: tourist villages can also be managed by cooperatives, where cooperatives are established by at least 20 members who are cooperative administrators and confirmed by the local Cooperative Service as a legal entity that is obliged to manage activities and produce profits (remaining profit / SHU) and is accounted for in the Annual Member Meeting (RAT) of the cooperative. Cooperative management can be updated regularly or as proposed in the RAT.
3. BUMDes: the official village legal entity formed by the village government and the Village Consultative Body (BPD) through village deliberations.

In accordance with the concept of *Community Based Tourism* (CBT), tourism villages make them the main subjects or actors in tourism development, then used for the welfare of the community.

One of the villages that develops tourism in Jombang Regency is Ngampungan village. Ngampungan village has a population of around 3,941 people with natural potential that can be optimized into a tourist destination. The natural potential of Ngampungan village is in the form of a Pandansili water source located about 3km from the Ngampungan Village Hall.

According to Rohan, who serves as the Head of Ngampungan Village, Pandansili is a natural spring that has existed since the Dutch colonial era. In 2018, village officials and local residents made efforts to optimize it into a tourist area. With the first step of cleaning the environment around water sources and reservoirs which until now have become a source of irrigation for village farms and playgrounds for children in Ngampungan village. [3]

Pandansili Tourism is also strategically located, transportation access is very easy, both public and private transportation. The beauty of Pandansili tourism is still very well maintained because it is located on the low land and flanked by hills. Researchers are interested in researching Pandansili tourism with the title of implementing the concept of *Community Based Tourism* (CBT) as an effort to achieve *the Sustainable Development Goals* (SDGs) of the village. Researchers also hope that the results of this study can be useful theoretically and practically.

METHOD

In researching the implementation of the concept of *Community Based Tourism* (CBT) as an effort to realize the *Sustainable Development Goals* (SDGs) of this research village using a qualitative research approach. The object of this study is Pandansili tourism, Ngampungan District, Jombang Regency, Indonesia. With informants, namely: Village Head, Village Secretary, Pokdarwis Chairman and 2 local people. The type of data used is qualitative data. The primary data sources that will be used are interviews of the Village Head, Pokdarwis Chairman, Village Secretary, and 2 local community members as well as field notes. As for the secondary data source that will be used, namely, administration in the form of data that is used as evidence to support the Pandansili tourism development process.

Data collection techniques are carried out by interview and documentation methods as well as observation. For the process of data analysis begins with drawing up a plan to manage the large amount of data collected and reduce it in the right way. The data analysis process will also involve transcripts, field notes, recorded data and certain other things taken by the researcher to report the research findings, thus involving the management of data validation, organizational data, and data

analysis prepared for reporting. The data analysis process in this study will be carried out with the stages of data reduction, data presentation and drawing conclusions.

RESULTS AND DISCUSSION

This community-based tourism is a concept of developing and developing tourist destinations by empowering local communities. Communities involved in *Community Based Tourism* (CBT) have a great involvement in developing and managing tourism activities that are able to provide economic benefits not only for the communities directly involved, but also benefit communities that are not directly involved because it causes a *multiplier effect*. In general, community-based tourism is often also referred to as *Community Based Tourism* (CBT). According to [9], *Community Based Tourism* (CBT) can provide economic and social regeneration while protecting cultures against the increasing tide of globalization.

a. Economic Dimensions

The sustainability of the economic dimension creates funds for community development, the creation of new jobs in the tourism sector, the emergence of local income from the tourism sector, where in this Pandansili water tourism has been able to manage and utilize funds to develop the community's economy from various sources and in the process of further development using visitor levy income every month.

With community-based tourism that makes the community the main figure in tourism management and development, there are opportunities for employment or opportunities to take advantage of it by opening several pandansili tourism support businesses. So that the Pandansili tourism can have a positive impact on people's income.

From the results of research conducted by researchers, it shows that tourism is able to affect economic conditions in Ngampungan village. In addition to improving the community's economy and increasing village income, the pandansili water tourism also creates jobs where with this increase in new jobs can indirectly have a positive impact on reducing unemployment and poverty.

b. Social Dimension

Indicators of the sustainability of the social dimension can be seen from improving the quality of life, increasing the pride of the existing community, fair division of roles between men and women, the younger and old generations, and building the strengthening of community organizations.

Based on information obtained from informants and the results of observations, the picture of an increase in community pride can be seen by serving visitors as a society that still upholds the spirit of family and togetherness even though most of the people have differences in beliefs.

The local community tries to provide the best service for visitors in order to give the impression of being a good host. In the contribution of local communities, tourism management groups do not distinguish or decriminalize gender and age while still placing positions that are appropriate to their respective statuses.

It can be concluded that tourism is able to affect social conditions in Ngampungan village. In addition to the absence of gender and age differences in the division of roles, duties, and responsibilities of the Ngampungan village community with the motto "*Guyub Rukun*" which means that all elements of society and all elements in Ngampungan village both internally and externally must respect each other's customs and beliefs, this makes the Ngampungan village community have a fairly high level of tolerance between religious people.

c. Cultural Dimensions

With the sustainability of the cultural dimension can encourage people to respect each other's different cultures, help develop and expand cultural exchanges, and maintain and preserve existing local cultures. The local community of Ngampungan Village in general has also been able to welcome visitors well so that efforts in respecting different cultures can be said to be quite optimal. This is seen from when there are visitors some of the people giving smiles and offering help.

From the results of research conducted by researchers, it shows that tourism is able to compete and make the local culture of Ngampungan village become potential and that is managed to be one of the sources of village income. The people of Ngampungan Village still preserve and maintain customs, such as activities in *the Month of Suro*, besides that the community also welcomes tourists so that they can respect each other's cultural differences.

d. Environmental Dimensions

The sustainability of the environmental dimension studies *the carrying capacity* of the area, regulates waste disposal, increases concern for the need for conservation, and maintains ecological balance. Pandansili tourist location flanked by hills gives a sense of beautiful natural beauty. With the sustainability of this dimension, it is hoped that it can continue to maintain and preserve the beautiful natural beauty.

The local community of Ngampungan village has a program to sort and process waste and learn environmental insights to continue to participate in maintaining and preserving the environmental ecosystem around Pandansili tourism. Not to forget also the community regularly cleans and maintains the cleanliness of Pandansili tourism.

From the results of research conducted by the author, it shows that with pandansili tourism, the preservation of nature owned by a village can be used as a potential village which can then be developed into village tourism itself. With pandansili tourism, the level of public awareness to preserve nature and maintain the balance of the ecosystem is increasing.

Achievement of *Sustainable Development Goals* (SDGs) for Villages

In this study, the context of the contribution of the role of local communities in the development and management of Pandansili tourism to achieve the sustainable development goals at the village level. This can be illustrated by the increase in Pandansili tourist visitors which continues to increase from year to year and can improve the welfare of the local community of Ngampungan village and help the economy grow evenly.

Table 4.3 Pandansili tourist visitor data

Year	Visitors
2020	21.666
2021	50.948

Source: Pandansili tourism Visitor Data Report 2020-2021

Based on the table above, it can be seen that with the existence of community-based Pandansili tourism, new jobs arise in the tourism sector. The increasing number of Pandansili tourist visitors has a positive impact on the local community of Ngampungan Village.

The high number of visitors requires tour managers to add human resources to help provide the best service for tourists. This has encouraged the emergence of new jobs in the tourism sector. With these jobs at the end of the day, it can reduce the unemployment rate in Ngampungan village.

Table 4.4 Number of Unemployed in Ngampungan Village

Year	Unemployment
2020	1.005
2021	955

Based on the analysis of the unemployment table from 2020-2021, the contribution of Pandansili tourism to the *Sustianable Development Goals* (SDGs) of villages in Ngampungan village, Barend District, the unemployment rate has decreased by 5%.

Several indicators of the type of Village Economy Grow Evenly in the *Sustainable Development Goals* (SDGs) of the Village have been achieved in Ngampungan village, this can be seen from the increasing contribution of tourism to PAD, the increase in the community's economy, the decline in the unemployment rate, and the increase in tourist visitors every year.

From the results of the research, during the 2 years of the establishment of Pandansili Tourism, namely in 2020-2021 tourists always experienced an increase, the unemployment rate also decreased, the emergence of innovations to attract tourists, much better infrastructure to meet the needs of tourists both from outside the area and local tourists themselves as well as good enough waste management so that it can maintain the ecosystem of the environment around Pandansili tourism.

Some *indicators of Sustainable Development Goals* (SDGs) of Villages type of Evenly Growing Economy Villages have been achieved well, it's just that in some other indicators such as the open unemployment rate has not reached 0%, the poverty rate has not reached 0%, the new labor force trained has not reached 100%, the industry pollutes the air has not reached 0%, and formal sector workers have not reached at least 51%.

CONCLUSION

Based on the identification from the results of previous discussions, it can be concluded that: Pandansili Tourism in Ngampungan village, Jombang Regency has applied the concept of *Community Based Tourism* (CBT) in economic, social, cultural and environmental dimensions.

The implementation of the concept of *Community Based Tourism* (CBT) or community empowerment tourism is in accordance with the fulfillment of the four dimensions of sustainability and the role of the community and the village government in managing and shepherding Pandansili tourism. Indicators of the *Sustainable Development Goals* (SDGs) of Villages type of Economic Villages Grow Evenly with the fulfillment of several aspects, such as increasing tourist visitors,

decreasing the number of displaced people, and improving the economy. However, in some other indicators have not been achieved, the village government and Pandansili tourism management actors have so far tried to achieve other indicators so that Ngampungan village can achieve the Village *Sustainable Development Goals* (SDGs) indicators.

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Abstract

The purpose of this study is to disclose the sustainability performance reporting of PT Petrokimia Gresik in 2018-2020 which has contributed to the achievement of the Sustainable Development Goals (SDGs) program and disclose sustainability performance reporting based on the 2016 GRI. This research is a qualitative research with a case study approach. This study used skunder data in the form of a sustainability report of PT Petrokimia Gresik 2018-2020 which was accessed from the company's official website. This study uses content analysis to uncover sustainability reports. The results of this study show that the sustainability performance of PT Petrokimia Gresik and contributes to the achievement of the SDGs has changed every year, in 2018 by 31.95%, in 2019 by 31.36%, in 2020 by 33.73%. Based on the 2016 GRI standard in 2018 PT Petrokimia Gresik revealed a partially applied with a percentage of 75.91%. In 2019 it revealed Partially Applied at 73.68%. In 2020 PT Petrokimia revealed well (Well Applied) with a percentage of 90.68%.

Keywords: SDGs, sustainability report, petrochemical gresik, corporate social responsibility

1. Introduction

Sustainable Development Goals (SDGs) are the agenda of 2016 with 17 (seventeen) goals and 169 targets set forth by the United Nations Organization (UN) to realize the welfare of people in the world. The Global Movement for the next 15 years is valid from 2016 to 2030. Presidential Regulation Number 59 of 2017 is a regulation related to the implementation of the SDGs.

Indonesia is one of the countries that has contributed and participated in realizing the SDGs. Indonesia's ranking in The Sustainable Development Report in the last five years has received a score of 65 to 69 with a range of 82 to 100 in the world. In 2021, Indonesia experienced an increase in ranking from the previous year, which was ranked 82nd in the world with a score of 68.9.

Indonesia always strives to realize the SDGs, one of which is to require companies to carry out Corporate Social Responsibility (CSR) activities. This is in accordance with the Law of the Republic of Indonesia Number 40 of 2007 concerning Limited Liability Companies Article 74 paragraph 1 concerning Limited Liability Companies that carry out business in the field and are concerned with natural resources are obliged to carry out social and environmental responsibilities.

Some examples of cases of companies in Indonesia that carry out environmental pollution, for example PT Karya Citra Nusantara (PT KCN) in the form of coal ash which is harmful to the health of local residents (ccindonesia.com, accessed April 5, 2022). Next, PT Greenfields Indonesia was proven to have violated the law by committing environmental pollution in the form of dumping thousands of cows' manure into residential areas (detik.com, accessed April 5, 2022). Furthermore, the leakage of PT Tidaar Kerinci Agung (PT TKA) waste resulted in environmental pollution in the Jujuhan District stream, Jambi Province which harmed the surrounding community (topsumbar.com, accessed April 5, 2022). These cases require companies to have a commitment in carrying out CSR activities by paying attention to economic aspects, social and environmental as a sense of corporate responsibility for losses received by society.

CSR is an obligation for business people to carry out CSR and carry out social responsibility with the aim of providing value that benefits society (Bowen, 1953). CSR is an activity to implement social responsibility carried out by the company to the surrounding community (Gantino, 2016).

The purpose of the company conducting business activities is to obtain a large profit. This focus and orientation triggers business people to exploit stakeholders, society, and the environment so as to cause social problems (Lako, 2011). The company not only focuses on making a profit but also the welfare of people, and ensuring the sustainability of the life of the planet (environment) (Global Compact Initiative, 2002 and Nugroho, 2007). This is in line with the 3P concept, namely profit, people and planet or known as the triple bottom line concept which consists of economic prosperity, environmental quality and social justice (Elkington, 1997).

The Company is responsible for disclosing and reporting on activity activities on the Sustainability Report. The Sustainability Report is regulated by the Financial Services Authority (OJK) through POJK No. 51/POJK.03/2017. The sustainability report has a reporting standard used, namely the 2016 Global Reporting Initiative (GRI) Standard which took effect on July 1, 2018. The 2016 GRI standard consists of 247 items divided into general disclosures and specific disclosures.

This research is about the company's CSR activities reported through sustainability reports revealed based on the 2016 GRI standards and the SDGs. This research was conducted on pt Petrokimia Gresik Company for the 2018-2020 period because its CSR activities always develop innovations that can be used as an example for companies that implement CSR activities well. PT PG's CSR activities in the economic, social and environmental fields have innovations that can add value to the company.

2. Literature Review

Legitimacy Theory

Legitimacy theory is a theory that is a reference in carrying out CSR activities and has a close relationship with the theory of stakeholders. Dowling and Pfeffer (1975) stated that there are 2 dimensions for a company to obtain legitimacy support, namely (1) the company's organizational activities must be in accordance with values in society; (2) reporting of company activities should reflect social values (quoted from Hadi, 2014, pp 91-92).

The perspective of legitimacy theory, companies try to meet the expectations of society to be responsive to the environment in which the company operates in accordance with the values and norms prevailing in society (Deegan, et al, 2002, pp. 319-320). This opinion is reinforced by O'Donovan (2002, 344) that the legitimacy of an organization can be as something that society gives to the company and

something that the company wants from society. Thus, legitimacy is a potential benefit for the company to survive (going concern) (quoted Hadi, 2014, p. 87).

Stakeholders Theory

Stakeholders consist of a group of people who can influence or be influenced by various decisions, policies in the implementation of the company's operating activities. Ghazali and Chariri (2007, p. 409) state that the theory of stakeholders is a theory that states that a company is not an entity that only operates for its own benefit, but must provide benefits to all stakeholders (shareholders, creditors, consumers, suppliers, governments, the public, analysts and other parties).

Corporate Social Responsibility

World Business Council for Sustainable Development (WBCSD) in its publication entitled Making Good Business Sense that the definition of CSR or social responsibility is a commitment of sustainable business people to behave well and contribute to economic development while improving the quality of life of the workforce and their families as well as the surrounding community and society more broadly (quoted by Hadi, 2014, p. 48).

Sustainability Report

Sustainability Report is a report on social responsibility activities that have been carried out by the company both related to attention to social and environmental impact issues. The sustainability report is inseparable from the company's annual report which is accounted for by the board of directors to stakeholders. The definition of sustainability report according to the Global Reporting Initiative (GRI) is the reporting of a company in a transparent manner covering economic, environmental, and social aspects and the arena including making positive or negative contributions to Sustainable Development.

Sustainable Development Goals

The Sustainable Development Goals entitled Transforming Our World: the 2030 Agenda for Sustainable Development as a global development agreement was officially endorsed by world leaders on September 25, 2015 located at the United Nations (UN) Headquarters. The SDGs contain 17 goals and 169 targets that are used as a global action plan for the next 15 years to take effect from 2016 to 2030. The goals of the SDGs are to end poverty, reduce inequality and protect the environment.

Global Reporting Initiative (GRI) Standards

GRI is an organization that is a pioneer in developing a comprehensive Sustainability Report framework. The organization was founded in 1997 by the Coalition for Economic Responsible Economies (CERES) in collaboration with the United Nations Environment Programme (UNEP). GRI standards are standards used in preparing sustainability reports. The standard is designed for organizations globally to use in reporting social, economic and environmental impacts.

3. Research Methods

Types of Research

This research is a qualitative research with a case study approach. Qualitative research is used in understanding phenomena holistically by explaining in the form of words and language in a special natural

context and by utilizing various natural methods (Moleong, 2014). Case studies are an in-depth data collection process that involves various sources of information (Sukoharsono, 2006).

Data Collection Techniques

The data collection technique is to use literature studies and documentation studies. Literature studies is collecting documents both through books and journals related to research topics. The documentation study was used in this study because researchers needed a collection of data on sustainability reports and annual reports of PT Petrokimia Gresik for 2018-2020 obtained from the official website of PT PG which is related to the research topics. The documentation study was used in this study because researchers need a collection of sustainability report data and an annual report of PT Petrokimia Gresik for 2018-2020 obtained from the official website of PT PG which has a relationship with the topics raised in this study.

Data Analysis Techniques

This study used data analysis techniques in the form of content analysis methods used to disclose PT PG's sustainability report. Content analysis is the analysis of the content of written information or text. Content analysis is a research technique to create inferences by systematically and objectively identifying specific characteristics in a text. The steps in analyzing the data consist of data collection, data reduction, data presentation and drawing conclusions.

4. Discussion Results

PT PG Sustainability Report for 2018-2020 in achieving the SDGs

PT Petrokimia Gresik (PT PG) is one of the companies that makes sustainability reports. The period for issuing the sustainability report is from January 1 to December 31. PT PG implements sustainability report since year 2010 to 2020 on the official website of PT PG which can be accessed by the public.

The theme of PT PG's sustainability report has different themes. In 2018 the theme of the sustainability report had the theme "Building Harmony Towards Agro-Industrial Solutions", in 2019 the theme of the sustainability report was "Towards Excellence and Sustainable Agriculture". In 2020 the theme of the sustainability report was "Growing, Developing, and Benefiting Indonesia". PT PG's sustainability report is intended for stakeholders such as shareholders, employees, the community, the government and other parties who want to know the sustainability performance of PT PG.

PT PG is committed to the success of the 17 goals and 169 targets and Sustainable Development Goals (SDGs) launched by the United Nations through the fulfillment of responsibility for 3 (three) aspects of sustainability, which include economic, social and environmental aspects. The results of the implementation of PT PG's sustainability performance are evaluated to determine the extent to which the company has implemented the SDGs goals and targets in the last three years, namely 2018-2020. The following is a table of PT PG's sustainability performance in order to contribute to the SDGs for the 2018-2020 period.

Table 4.1: Percentage of Disclosure of PT PG's Overall Sustainability Performance in Contributing to the SDGs for the 2018-2020 Period

No	Goals of the SDGs	Maximum Percentage Weight (%)	PT PG Contribution Percentage (%)		
			2018	2019	2020
1.	End poverty	4,14%	1,78%	1,78%	1,78%
2.	End hunger	4,73%	2,96%	2,96%	3,55%
3.	Ensuring a healthy life and well-being	7,69%	2,37%	1,78%	2,37%
4.	Education and training	5,92%	1,78%	2,37%	1,78%
5.	Gender equality	5,33%	1,18%	1,18%	1,78%
6.	Availability of clean water and sanitation	4,73%	2,96%	2,37%	1,78%
7.	Affordable energy access	2,96%	1,18%	1,18%	1,18%
8.	Economic growth and decent work	7,10%	3,55%	3,55%	3,55%
9.	Infrastructure, industrialization and innovation development	4,73%	1,77%	1,78%	1,78%
10.	Reducing inequality within and between countries	5,92%	1,78%	1,78%	1,78%
11.	Inclusive urban and residential development	5,92%	0,59%	0,59%	1,18%
12.	Ensure sustainable consumption and production patterns	6,51%	2,96%	2,96%	2,96%
13.	Handling climate change	2,96%	1,18%	1,18%	1,18%
14.	Protecting the marine ecosystem	5,92%	0,59%	0,59%	0,59%
15.	Protecting terrestrial ecosystems	7,10%	0,59%	0,59%	0,59%
16.	Peace, justice and strong institutions	7,10%	3,55%	3,55%	3,55%
17.	Strengthening implementation measures and revitalizing sustainable partnerships	11,24%	1,18%	1,18%	2,37%
	Total	100%	31,95%	31,36%	33,73%

Source: Processed secondary data, 2022

Based on the table above, PT PG's sustainability performance in achieving the SDGs is quite stable from year to year for the last 3 (three) years. This shows that PT PG is committed to contributing to the SDGs program consistently. The contribution represents 17 goals and 169 targets of the SDGs program launched by the United Nations.

In 2018, PT PG's sustainability performance succeeded in achieving the SDGs of 31.95%. The contribution represents 17 SDGs goals and 54 targets from 169 targets and includes all disclosures of PT PG's sustainability report for the 2018 period. Each percentage of SDGs 1 to SDGs 17 can be seen in the table above.

In 2019, PT PG's contribution decreased by 0.58% to 31.36%. The decrease in contribution occurred because PT PG in disclosing the 3rd (third) SDGs and the 6th (six) goals compared to 2018

experienced a decrease. In the 2019 sustainability report, there is no HIV-AIDS prevention and control program in the workplace and the implementation of goal 6 (six) there is no reported community empowerment program local communities in improving sanitation, causing a decrease in percentage in 2019. But the contribution of PT PG an increase compared to the previous year in the 4th (fourth) SDGs goal because PT PG organized a gebyar peduli program for Children with Special Needs (ABK) and persons with Disabilities in accordance with one of the targets of the 4th (fourth) SDGs goal.

In 2019, apart from the SDGs 3 (three), 6 (six), and 4 (four) SDGs from the previous year, pt PG's contribution from the previous year did not increase and decrease. This can be interpreted to mean that the previous year's programs were mostly the same as in 2019, it's just that there were some programs that experienced additions but did not increase the percentage because the number of target implementations was the same as the previous year.

In 2020, PT PG's contribution increased by 2.37% to 33.73%. The increase in contribution occurred because in the 2020 sustainability report there were several new targets from the 17 SDGs objectives revealed by PT PG, including the 2nd (two) SDGs goal in the 2nd target (two) and the 5th (five) SDGs goal 4 (four) target implemented through the sekar mamamia program (mama cadre school and petrochemical youth). However, in 2020 there was also a disclosure of the SDGs objectives that have decreased, including in the 4th SDGs (four) target 5 (five), the company did not report on concern for Children with Special Needs (ABK) and Persons with Disabilities. In 2020, apart from the 2nd (two), 3 (three), 4 (four), 5 (five), 6 (six), 11, and 17 SDGs, pt PG's contribution from the previous year did not increase and decrease.

The evaluation of PT PG's sustainability report is the need for consistency in reporting sustainability reports every year, because some programs are reported in the reporting year but the following year are not reported. However, the programs that have been carried out and reported are very beneficial for stakeholders, especially the surrounding community.

Analysis of PT PG's Sustainability Report Based on GRI Standards 2016

PT PG applies the triple bottom line concept where the company does not only seek profit (profit), but also the welfare of the community (people) and protect the environment (planet). In preparing the sustainability report, PT PG uses the established guidelines, namely the 2016 GRI Standard. The GRI standard is divided into two disclosures, i.e. general disclosure standards with series 100 and specific topic disclosure standards consisting of economics (series 200), environment (series 300), and social (series 400). From the two disclosure groups, an in-depth analysis will be carried out through PT PG's sustainability report for 2018-2020. The following is a table of the results of PT PG's sustainability report for the 2018-2020 period based on the 2016 GRI standard:

Table 4. 2 Table of Pt PG Sustainability Report Results for the 2018-2020 Period Based on 2016 GRI Standards

2016 GRI Disclosures	2016 GRI Disclosure Max Value	Maximum Disclosure Score (PM*2)	Total Score Total Disclosure (PM*2)		
			2018	2019	2020
General	56	112	79	84	104
Economy	38	76	51	51	61
Environment	56	112	75	77	102

Social	97	194	170	152	181
Total Disclosure	247	494	375	364	448
Percentage of Disclosure (%)	100%	100%	75,91%	73,68%	90,68%

Source: Processed secondary data, 2022

Based on the results of the table above, the sustainability performance reporting of PT Petrokimia Gresik is reflected in PT PG's sustainability report for the period 2018 to 2020 based on the 2016 GRI standard. In 2018, the suitability of the implementation of PT PG's overall sustainability performance got a percentage result of 75.91% which is classified as Partially Applied (range 41%-75%). In 2019, the suitability of the implementation of PT PG's sustainability performance as a whole received a percentage result of 73.68% which is classified as Partially Applied (range 41%-75%). In 2020, the suitability of the implementation of PT PG's sustainability performance as a whole received a percentage result of 90.68% which is classified as Well Applied (range 41%-75%).

General Disclosure Standards (Series 100)

The general disclosure standard (series 100) is a standard used to report coincidental information about companies and sustainability reporting practices. General disclosures consist of profiles, strategies, ethics, and integrity, governance, stakeholder engagement practices, and corporate reporting practices.

The general disclosure consists of 56 sub-chapters of which each sub-chapter has a maximum score of 2 so that the maximum total score for the general disclosure is 112 points. The total general disclosure score after multiplication 2 in 2018 was 79 points, in 2019 it was 84 points, and in 2020 it was 104 points.

Based on the description described above, the researcher concluded that during 2018-2020 PT PG had reported sustainability reports on the general disclosure standard (series 100) well in accordance with the 2016 GRI standards and annually experienced an increase in scores. However, there are some items that are still unreported and there are some items that are still incomplete so PT PG needs to explain in more detail.

Disclosure of Specific Topics

The specific standar disclosure is one of the disclosures of the 2016 GRI standard which consists of economic (series 200), environmental (series 300), and social (series 400) topics. Series 200, 300, and 400 used to disclose information including company impacts related to economic, environmental, and social topics. In disclosing specific topics, each topic-specific standard is equipped with a management approach. The purpose of the management approach is the approach used to report information about how an organization manages specific topics and material topics contained in sustainability reports.

a. Economics-Specific Topic Standard Disclosures (Series 200)

The first topic-specific disclosure in the 2016 GRI standard is economics (series 200). Specific economic topics (200) are divided into 7 (seven) sections, namely disclosing information related to the company's economic performance (201), market presence (202), indirect economic impacts (203), procurement practices (204), anti-corruption (205), anti-competitive behavior (206), and taxes (207).

Based on table 4.2 above, the researcher concludes that during 2018-2020 PT PG has reported the sustainability report on the standard disclosure of specific economic topics (series 200) well in accordance with the 2016 GRI standard. , so it can be seen in table 4.2 that 2018 and 2019 had the same total score of 51 points, and an increase in the score to 61 points in 2020. However, there are several items that have not been reported and some items are still incomplete so that PT PG needs to explain in more detail.

b. Environmentally Specific Topic Standard Disclosures (Series 300)

The second topic-specific disclosure in the 2016 GRI standard is the environmental field (series 300). Environmental-specific topics (300) are divided into 8 (eight) sections, namely disclose information related to materials (301), energy (302), water & effluent (303), biodiversity (304), emissions (305), wastewater (effluent) and waste (306), environmental compliance (307), and assessment supplier environment (308).

Based on table 4.2 above, the researcher concludes that during 2018-2020 PT PG has reported the sustainability report on environmental-specific topic disclosure standards (series 300) properly in accordance with the 2016 GRI standards. PT PG is trying to improve so that disclosure in sustainability reports does not decrease score, so it can be seen in table 4.2 that in 2018-2020 there was an increase. However, there are some items that have not been reported and there are some items that are still incomplete so that PT PG needs to explain in more detail.

c. Social Specific Topic Standard Disclosures (Series 400)

The third topic-specific disclosure in the 2016 GRI standards is the social field (series 400). Social specific topics (400) are divided into 19 sections, namely disclosing information related to employment (401), labor relations or management (402), occupational health and safety (403), training and education (404), diversity and employment opportunities (405), non-discrimination (406), freedom of association and collective bargaining (407), child labor (408), forced or compulsory labor (409), security practices (410), rights of indigenous peoples (411), human rights assessment (412), local communities (413), supplier social assessment (414), public policy (415), customer health & wellness (416), marketing & labeling (417), customer privacy (418), and socioeconomic compliance (419).

Based on table 4.2 above, the researcher concludes that during 2018-2020 PT PG has reported the sustainability report on the social-specific topic disclosure standard (series 400) well in accordance with the 2016 GRI standard. the safety practices chapter (410) and the public policy chapter (415) are not reported in the 2019 PT PG sustainability report so PT PG needs to explain in more detail.

Relation of Results & Discussion with The Theoretical Basis Used'

The PT PG Sustainability Report for the 2018-2020 period reports on customer satisfaction and environmental satisfaction where this is in accordance with the GRI 2016 standard disclosures. In the last 3 (three) years, namely the 2018-2020 period, the scores obtained each year have increased. Thus, based on the customer satisfaction index and environmental satisfaction, PT PG has carried out CSR activities based on legitimacy theory. This legitimacy is in accordance with the statement from Dowling and Pfeffer (1975) that PT PG received legitimacy support, namely (1) the company's activities were in accordance with community support which showed "very satisfied" with PT PG which based on the results of the environmental satisfaction survey for the 2018-2020 period experienced an increase. scores annually, (2)

reporting on company activities has reflected social values in accordance with PT PG's CSR activities in the social sector.

In business continuity, PT PG involves stakeholders, either directly or indirectly. Stakeholders are also one of the factors that determine the company's success in creating sustainable value and supporting the SDGs so it is necessary to maintain harmony and synergy while preventing conflicts of understanding through maintaining good communication. With the involvement of stakeholders, this reflects that PT PG is in accordance with the stakeholder theory.

CONCLUSIONS AND SUGGESTIONS

Conclusion

The results obtained in this study are the results of the implementation and evaluation of the CSR program for the achievement of SDGs at PT PG in the 2018-2020 sustainability report that for 3 (three) years The last one has carried out CSR activities which are reported through the PT PG sustainability report. In 2018 to 2019 the percentage of PT PG's contribution to sustainability performance has decreased, which is due to programs that are not reported as in 2018. In 2019 to 2020 the percentage of PT PG's contribution has increased due to several programs added in accordance with the SDGs.

CSR evaluation in PT PG's sustainability report is the need for consistency in reporting sustainability reports every year, because several programs are reported in the reporting year but the following year is not reported. In addition, PT PG's SDGs achievement through stakeholder involvement is in accordance with stakeholder theory.

Based on the 2016 Global Reporting Initiative (GRI) Standards, the results of the implementation of PT Petrokimia Gresik's CSR program in the 2018-2020 sustainability report that PT PG in the last 3 (three) years has used the 2016 GRI Standards in the economic, environmental and social sectors. The results obtained for the last 3 (three) years have decreased from 2018 to 2019, and increased from 2019 to 2020. In addition, the existence of an index of customer satisfaction and environmental satisfaction proves that PT PG is supported by the surrounding community in accordance with the legitimacy theory.

Suggestion

After conducting the analysis conducted by the researcher, the researcher has several suggestions for the company and for the next researcher who will conduct similar research, namely:

1. For Companies

PT Petrokimia Gresik in terms of disclosure of sustainability reports to achieve the SDGs has been quite good from year to year. However, it would be better if the company was more thorough and consistent in disclosing the targets achieved from the SDGs goals. Due to some programs reported in the reporting period, are not reported in the year of the next reporting period. However, the programs that have been carried out and reported are very beneficial for the stakeholders, especially the surrounding community.

In addition, PT Petrokimia Gresik should improve the disclosure of the 2016 GRI standard, both general disclosure and disclosure of specific topics supported by more detailed data in the sustainability

report so that it can make it easier for readers and future researchers to analyze the company's sustainability performance.

2. For Further Researchers

Further research can continue this research or conduct similar research by correcting all the limitations of the study so that it can produce more perfect research. Future research is expected not only to use secondary data in the form of sustainability reports, but can conduct research with additional data obtained directly (primary data) such as interviews, observations or surveys so that they can make a more perfect analysis because it can make comparisons between disclosures in sustainability reports. with the reality on the ground.

Research Limitations

This research is subjective in the disclosure of SDGs which is carried out based on the researcher's point of view using supporting theory. This is because there are no standard provisions in disclosing so that assessments with the same topic can be different for each researcher. In addition, in the 2016 GRI standard index there are still several items that have not been disclosed and some items whose disclosures have not been based on detailed data in the PT PG report for the 2018-2020 period, thus affecting the results of the study.

This study uses secondary data, which means that researchers do not conduct research directly on the object of research, so the information obtained only comes from the sustainability report of PT PG.

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Disclosure of Sustainable Finance in Indonesian Banking from Institutional Theory Perspective

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Abstract: This study focuses on the objective of revealing the implementation of Corporate Social Responsibility (CSR) and its implications for financial performance strengthened by corporate governance in the Indonesian banking sector from 2017-2021. CSR is measured by social and environmental performance, financial performance is measured by return on assets and CG is measured by the board of directors. The research approach uses a quantitative approach using secondary data, namely annual financial reports, annual reports and published bank sustainability performance. The study population consists of 43 banks listed on the Indonesia Stock Exchange. The analytical tool used is Partial Least Square (PLS). The results show that CSR has a positive effect on bank financial performance and corporate governance strengthens the influence of CSR on financial performance.

Keywords: Corporate social responsibility, corporate governance, financial performance, institutional theory.

Introduction

Financial performance is an analysis carried out to see the extent to which a company has implemented it using financial implementation rules properly and correctly (Fatihudin et al., 2018; Khoerunisa, 2019). To analyze the financial performance of a company, a company can review the financial statement data, with the aim that the financial statements that have been made are in accordance with the application of generally accepted rules in the world of accounting, so that the results of the financial statements can be accounted for. Financial performance is determined by using financial statements with profitability to measure the level of effectiveness of the company's management as indicated by the amount of profit generated from sales and investment. (Boyoh & Sinabutar, 2021). The better the profitability ratio, the better it describes the company's high ability to earn profits (Alarussi, 2021). The increase in company profits is also influenced by CSR practices and disclosures. The company's business in addition to obtaining high profitability, the company also provides benefits and pays attention to the welfare of stakeholders, because stakeholders play an important role in the sustainability of a company's business.

The implementation of CSR practices is one of the company's strategies to benefit and prosper stakeholders (Humanitisri & Ghozali, 2018). The company's focus on CSR can attract investors to invest so that it can lead to higher company financial performance (Alexander, 1978), considering that investors are now aware of the importance of social, environmental and economic issues. The company considers that reputation is a factor to be maintained and protected (Danciu, 2013). Some authors also argue that greater investment in companies with better social performance (Teoh & Shiu, 1990). Eccles et al., (2017) concluded that it is very important to invest in CSR. Companies that do so have higher financial performance, create greater value for all their shareholders, and companies gain loyal customers and more committed employees (Gaio & Henriques, 2020). One type of industry that is often debated in the role of CSR on financial performance is banking. Scholtens (2008) states that banks are socially responsible for providing rewards to investors, without ignoring the expectations of society. In this case, because of the relationship between corporate social responsibility and reputation (Margolis et al., 2012; Pérez & del Bosque, 2015), increasing attention

has been devoted to the impact of CSR on the financial performance of banks (Esteban-Sanchez et al., 2017; Shen et al., 2016).

Banks have an important role as financing managers in economic development, so they need to respond positively to environmental and social changes (Beck & Demirgüç-Kunt, 2009; Mohamed & Salah, 2016; Scholtens, 2011). This has an impact on almost the entire financial services industry throughout the world, to maintain aspects related to the environment and social in the context of providing credit/financing. Perez & del Bosque (2012) states that banking institutions must provide various legal, economic, ethical and policy services. Bank Indonesia Circular No. 15/28/DPNP concerning Asset Quality Assessment of Commercial Banks, encourages banks to consider environmental feasibility factors in assessing a business prospect. Bank Indonesia requires business actors who apply for funding to banks for environmental feasibility assessment of business activities in accordance with government regulations. In the end, it is limited by the emergence of obstacles and regulations that require social and environmental responsibility in business processes. OJK Regulation No.51/POJK.03.2017 concerning the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies strengthens previous government regulations. This has an impact on banking business processes, which not only imposes environmental aspects on lending but also on bank soundness activities. Institutional theory states that the social environment can significantly influence the development of the formal structure in an organization, which is often stronger than pressure from the market. These developments are related to the features of the social structure that reflect the impact of norms, rules, and routines as imposing guidelines in an organization which is often stronger than pressure from the market. These developments are related to the features of the social structure that reflect the impact of norms, rules, and routines as imposing guidelines in an organization which is often stronger than pressure from the market. These developments are related to the features of the social structure that reflect the impact of norms, rules, and routines as imposing guidelines in an organization (Kuppi, 2013). Understanding of institutional pressures encourages banks to adapt to sustainability regulations in order to create sustainability norms. Companies generally carry out an isomorphic behavioral process from institutional theory to adopt, and adapt operations to the surrounding environment (DiMaggio & Powell, 1983).

This study also uses Corporate Governance as a moderating variable which is proxied using the board of directors. Corporate governance as a moderating variable in this study is expected to strengthen the relationship between CSR disclosure and company performance. Financial performance is a measure of the success of the implementation of financial functions and this is very important, both for banks and for all stakeholders. The importance of assessing financial performance achievement by analyzing financial statements and the bank's concern for the performance of the social environment. The more complex the activities of bank management, the greater the need for good corporate governance practices to ensure that bank management runs well. This study tries to contribute to the disclosure of sustainable finance in Indonesian banking through the application of institutional theory in the development of a theoretical framework. The role of stakeholders is very important in influencing the adoption of CSR. Based on the existing literature this study proposes that different stakeholder pressures can have a positive influence on CSR adoption. This study fills the gap in research on CSR disclosure and implementation on financial performance, especially in the Indonesian banking industry.

Research methods

This study uses a quantitative approach using secondary data obtained indirectly from third parties through intermediary media with various available sources. The data was obtained from the Indonesia Stock Exchange website (www.idx.co.id). Data processing is carried out using path analysis assisted by WarpPLS software. Partial Least Square (PLS) is a multivariate statistical technique that can handle many response variables and explanatory variables (Rehearsal & Kowalski, 1985). In this study, the population used is 43 banks and as many as 22 banks are obtained as samples. For the sampling technique using the purposive sampling method, the criteria aspects of all banking sector

companies and recorded on the IDX in 2017-2021 are reporting sustainable performance and not experiencing losses.

Results and Discussion

1. Outer Model Test, Composite Reliability and Cronbach Alpha

There is no outer loading value below 0.5, so all indicators are declared feasible or valid for research use and can be used for further analysis. Composite reliability of all research variables > 0.7 . These results indicate that each variable has met composite reliability, so it can be concluded that all variables have a high level of reliability. The table shows the Cronbach alpha value of each research variable > 0.6 . Thus these results can indicate that each research variable has met the requirements of the Cronbach alpha value, so it can be concluded that all variables have a high level of reliability.

Table 1 Outer Model Test, Composite Reliability and Cronbach Alpha

Variable	Outer Loading	Composite Reliability	Cronbach Alpha
CSR (X)	1,000	1,000	1,000
ROA (Y)	1,000	1,000	1,000
CG(Z)	1,000	1,000	1,000

2. Discriminant Validity (Discriminant Validity)

Table 2 Output Correlations among Latent Variables with Square Roots of AVEs

Variable	X	Y	Z
CSR (X)	(1,000)	-0.027	-0.085
CG(Z)	-0.019	(1,000)	0.966
ROA (Y)	-0.085	0.966	(1,000)

3. Goodness Of Fit Test (Inner Model)

Table 3 R-Square . Value

Variable	R-Square Value
ROA	0.054

The R-Square value for the ROA variable is 0.054. Obtaining this value explains that the large percentage of ROA is influenced by CSR and CG.

Table 4 Q-Square . Value

Variable	Q-Square Value
ROA	0.547

The Q-Square value of the ROA variable is 0.547. This shows the magnitude of the diversity of research data that can be explained by the research model is 54.7%. Thus, from these results, this research model can be declared to have a fairly good goodness of fit.

Hypothesis test

Table 5 Tabulation of Estimation Results from the Research Model

Variable	Path Coefficient (β)	p-value	Note:
CSR \rightarrow ROA	0.45	0.01	Significant
CSR \rightarrow GCG \rightarrow PBV	0.27	0.01	Significant

The results of the hypothesis test show that the path coefficient value is 0.45 and the p-value is 0.01, which means that CSR has a positive and significant effect on ROA in go public banking companies listed on the Indonesia Stock Exchange for the 2017-2021 period. The estimation results of path coefficients to test the strength of the influence between the independent variables on the dependent variable by including the role of the moderating variable are CG (Z), CG moderates the effect of CSR (X) on ROA (Y). The value of the CSR variable moderated by CG shows a significance value of $0.01 < 0.05$ which is significant in a positive direction. So it can be concluded that the GCG variable is able to moderate (strengthen) the influence of CSR on ROA with a Quasi moderating type, namely a variable that moderates the relationship between the independent variable and the dependent variable which is also the independent variable.

The Effect of CSR on Financial Performance

CSR has an effect on financial performance. The results of proving the first hypothesis prove that CSR has a positive and significant effect on financial performance. This shows that the higher the level of CSR disclosure, the higher the financial performance. The company's obligation to carry out CSR is regulated in the Law on Limited Liability Companies No. 40/2007 concerning the implementation of CSR. The implementation of CSR makes the banking image better so that consumer loyalty becomes higher. Increased consumer loyalty has an impact on the level of income and profitability of banks, meaning that the higher the financial performance. The company is not only concerned with the interests of the company but also the interests of the government, society, consumers, and suppliers. Good relations with the community can be through social responsibility or CSR (Ermayanti, 2019). CSR has an important role to improve financial performance as a result of increasing bank income by using several social responsibility activities in the local environment. CSR disclosure has an effect on financial performance, which means that investors in Indonesia have considered corporate social responsibility reports so that the need for social responsibility information is a material consideration for investment decision making. The results of this study are in line with CSR disclosure has an effect on financial performance, which means that investors in Indonesia have considered corporate social responsibility reports so that the need for social responsibility information is a material consideration for investment decision making. The results of this study are in line with CSR disclosure has an effect on financial performance, which means that investors in Indonesia have considered corporate social responsibility reports so that the need for social responsibility information is a material consideration for investment decision making. The results of this study are in line with Alexander (1978) and Humanitisri & Ghazali, (2018) which explains that CSR disclosure is the company's competitive advantage so that it is expected to increase company awareness in implementing and disclosing CSR activities carried out. The results of this study are in line with institutional theory which shows that banking social performance due to coercive pressure, namely the government as regulators and policy makers through OJK Regulation No.51/POJK.03.2017 which requires LJK Banking to disclose sustainable performance to stakeholders. Disclosure of CSR in the annual report strengthens the good name of the company and becomes one of the considerations that investors and potential investors pay attention to when choosing an investment location because they consider the company to give a good name to the community if the company does not only pursue profit but has paid attention to the environment and society.

CG Strengthens the Effect of CSR on Financial Performance

Based on the results of hypothesis testing, it is found that CG as proxied by the board of directors can moderate the relationship between CSR and financial performance as proxied by ROA. Disclosure of banking CSR increases profits in firms affected by the board of directors. In other words, management decisions in investing are not only based on the high financial performance of a number of companies in a certain period. So that CG is able to be a moderating variable in the

relationship between CSR and financial performance. The obligation to implement CG in the banking sector was also initiated by Bank Indonesia (BI) on January 30, 2006. BI issued guidelines for the implementation of good corporate governance for banks, namely PBI No. 8/4/PBI/2006 concerning the Implementation of Good Corporate Governance for Commercial Banks. BI as the banking authority realizes that the increasingly complex risks faced by banks require the implementation of GCG practices with higher quality. With this regulation, BI wants to achieve the goal of improving bank performance, protecting the interests of stakeholders and increasing compliance with applicable laws and regulations and generally accepted ethical values in the banking industry. Financial performance is a measure of the success of the implementation of financial functions and this is very important, both for investors and for the company concerned. The importance of evaluating company performance by analyzing financial statements has triggered the thoughts of company leaders that managing a company in the modern era with rapid technological developments is a very complex thing. The more complex the company's management activities, the greater the need for CG to ensure that the company's management runs well (Kabir & Thai, 2017; Permatasari & Widianingsih, 2020). The results of the study support the institutional theory that with coercive pressure through regulations issued by BI, banks implement GCG to strengthen the relationship between CSR implementation on bank financial performance.

Conclusion

Disclosure of Corporate Social Responsibility has a positive and significant impact on Company Value in public listed BUMN banking companies on the IDX for the period 2017-2021. This shows that the higher the level of CSR disclosure, the higher the value of the company. CSR disclosure from 2017-2021 is quite good because it has followed the standards issued by GRI. With the disclosure of CSR, stakeholders will give a positive assessment which is indicated by an increase in the company's stock price. This increase will cause the value of the company to increase. Corporate Governance strengthens the effect of Corporate Social Responsibility disclosure on firm value in publicly listed banking companies on the IDX for the 2017-2021 period. This is because the indicators of the board of directors are relatively high for disclosing social responsibility activities, thereby strengthening the influence of CSR on financial performance. This research is still limited to the disclosure of banking CSR, for further research can conduct research on industries that are not required to make sustainable financial performance reports based on government regulations such as the tourism industry.

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Doing it right: Earnings Management Based on Hindu Religious Principles

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Abstract

This study aims to formulate the concept of earnings management based on the Purusa-Pradana concept. Purusa-Pradana is a concept to achieve a santhi/peaceful balance of life for Hindus, especially the Balinese. In this case profit can be interpreted as good karma obtained from an action or activity. Profit must be managed properly to obtain a peaceful life and achieve true sustainability. This research was conducted from a religious point of view. Based on the results of the study, the researcher offers the concept of earnings management with the 3 per 3 earnings management method.

E-GOVERNMENT AS A FORM OF PUBLIC ACCOUNTABILITY AND EMANSIPATORY SPIRIT: OR NOT?

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ABSTRACT

Purpose — *This study offers an in-depth contextualisation and critical analysis on the use of e-government in the Situbondo Regency. The government, apparatus, and citizen believe that e-government strengthen the public accountability and support the spirit of emansipatory, nevertheless the soul of the public service is being degraded.*

Design/methodology/approach — *This research elaborate the contextual analysis approach and upon the in-depth interviews which provide relevan key material for the analysis. Contextual analysis obtained from literature on key aspects of the context, vis-à-vis of focus and the in-depth interview conducted with the informants of apparatus which was involved with the electronic-based government system and the citizens.*

Findings — *Bureaucratic reforms carried out through the public policy system do not emphasize the values of humanist philosophy and do not reflect a good governance, e-government is only a mere information technology revolution; the digital divide is still a crucial problem because of the silencing of citizens' rights because people are not literate in the information technology; public accountability cannot be formed from e-government, it even opens up opportunities for brokers which ultimately hinder the achievement of the integrity zone.*

Keywords — *e-Government; Accountability; Digital Divide; Emansipatory Spirit*

EFFECTIVENESS OF ORGANIC WASTE AS DAMPER ON NOISE INTENSITY AND MECHANICAL VIBRATION TESTING OF PELLET MACHINES

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ABSTRACT

Machines and mechanical work equipment cause vibrations which part of the force is transmitted to workforce body or objects found in workplace and work environment. Noise and mechanical vibration of pellet machine are physical factors in work environment that have an impact of work-related accidents and occupational diseases. One of control hierarchies uses engine dampers, in this research using organic waste as a damping material. The aims of this study was to measure of noise and vibration intensity at the pellet machine using or without a damper by testing of noise and mechanical vibration intensity on pellet machines and workers exposed to it.

The analysis methods is carried out at the pellet machine by providing a damper from organic waste treatment (fibrous) with variations in thickness of 10 mm and 5 mm and carried out with 3 times of noise measured using Sound Level Meter (machine) and Noise Dose Meter (workers) while mechanical vibration using Vibration Meter (machine) and Whole Body Vibration Meter (workers). The research data continued with statistic test and show the distribution pattern of safe work area by noise and vibration maps using the surfer 13 application.

The results of research are expected to show a decrease of noise and mechanical vibration intensity by providing a damper from organic waste at pellet machine. Indicates a difference between dampened and undamaged machines (machine and workers exposure) and indicates a mapping of safe area from noise and mechanical vibration exposure in the workplace.

Keywords: Organic Waste Damper, Noise, Mechanical Vibration, Pellet Machines

EMPIRICAL STUDY OF THE INFLUENCE OF STAKEHOLDERS ON CORPORATE SOCIAL RESPONSIBILITY

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Abstract

In essence, the company was formed with the aim of getting as much profit as possible. Behind it all, the company also has responsibility for various aspects that are affected by its business activities such as the environment and society. Therefore, the issuance of financial statements alone is not enough to maintain the trust that has been given by stakeholders to the company, so a corporate social responsibility report is also needed. Stakeholder theory is used to underlie this research. This study aims to determine the influence of stakeholders on the disclosure of corporate social responsibility. The object of this research is an oil palm plantation company listed on the Indonesia Stock Exchange (IDX) in the period 2017-2021 and the sampling of the research used non-probability sampling which resulted in a sample company with 25 issuers data. The results of the study showed that the results of the t test known that the media has effect on the disclosure of corporate social responsibility. Meanwhile, shareholders, government, and employees have no effect on the disclosure of corporate social responsibility. In accordance with the results of research media has sufficient evidence to have an influence with the disclosure of corporate social responsibility.

Keywords: shareholders, employee, government, media, disclosure of corporate social responsibility

Pendahuluan

Corporate social responsibility itself was introduced in Indonesia in the 1980s and its use has been growing since the 1990s. Starting in 2007, after the enactment of Law No. 40 of 2007 concerning the obligations of Limited Liability Companies, almost all companies have carried out *corporate social responsibility* and later ratified government regulation no. 47 of 2012 concerning the social and environmental responsibility of limited liability companies. Until August 1, 2012 when the Indonesian government implemented government regulation Kep-431/BL/2012 regulated in the Financial Services Authority (OJK) stating that every public company must report its corporate social responsibility activities in the annual report, otherwise it will be subject to sanctions has been regulated in Article 74 paragraph (1) in the Limited Liability Company Law (UUPT) and Article 34 paragraph (3) in the Investment Law (UUPM).

Stakeholder Theory

According to Archie B. Carroll Ann K. Buchholtz (2018) the definition of *stakeholder theory* is stakeholders who are groups or individuals with whom the organization interacts or has freedom. *Stakeholders* refer to people or organizations who influence or are affected by company decisions, policies and operations. The word *stake* itself when used as a verb has the meaning of marking territory by asserting ownership. *Stakeholders* in a company consist of various groups, namely customers, workers, shareholders, governments, suppliers, professional and trade associations, social and environmental activists and non-governmental organizations.

Corporate Social Responsibility

Corporate social responsibility (CSR) has been around since the 1980s and expanded its use in the 1990s. In Indonesia itself, CSR was formed through Law no. 40 of 2007 concerning limited liability companies which require companies or investors to carry out corporate social responsibility. Until 2012, Indonesia issued a government regulation Kep-431/BL/2012 which is regulated in the Financial Services Authority (OJK) stating that every public company must report its CSR activities in an annual report. Now, corporate social responsibility has become important for the development of corporate sustainability and can build a good and trusted image for a company.

Stakeholders

Stakeholders in the sense according to R. Edward Freeman (2010) have 2 meanings, namely, *narrow definition* and *wide definition*. *Narrow definition* is a stakeholder including groups that are important for the survival and success of the organization. Then, in a *wide definition*, stakeholders include all groups or individuals who can influence or be influenced by the corporation. According to R. Edward Freeman (2010) also, stakeholders (*stakeholders*) are divided into 2, namely, primary stakeholders (*primary stakeholders*) and secondary stakeholders (*secondary stakeholders*). In this sense, *primary stakeholders* are *stakeholders* who officially have a contractual relationship with the company. For example, employees, customers, communities, investors, and suppliers. *Secondary stakeholders* are stakeholders who do not officially have a relationship with the company. For example, business competitors, government, media, special interest groups, and customer advocate groups.

Government

As an agency with power related to regulating a country's regulations, the government is one of the stakeholders with impacts that can affect company activities because the government makes regulations that emphasize each company regarding CSR activities and their sustainability reports (Qisthi & Fitri, 2020).

Employee

Employees are one of the most valuable assets for the company. Employees themselves are included as *intellectual capital* or also called human resources. With many trainings or knowledge learning that has been occupied by an employee, it can increase its value and quality.

Shareholders

Shareholders are organizations, groups, or individuals who purchase ownership rights/shares or who have already taken part in the ownership of the company. Companies with low share ownership tend to have poor social responsibility compared to companies with high share ownership.

Media

The development of the era until now, has made all information can be quickly accessed by any person or sector who needs information. The ease of gathering information is assisted by the internet. The internet is an information network that connects people all over the world.

Corporate Social Responsibility Disclosure

Reporting does not only stop until the report is finished, but also disclosure or reporting must be carried out or also commonly referred to as *corporate social responsibility disclosure*. The extent and scope of disclosure or reporting has its basis which is regulated in the regulations issued by the *Global Responsibility Index* (GRI) and the disclosure or reporting must be correct based on the values in GRI.

Hypothesis

Influence of Shareholders on Corporate Social Responsibility Disclosure

The better the results reported in the social responsibility report, the better their long-term investment and risk management will be. In a study conducted by Hamdani et al. (2017) stated that shareholders have an influence on CSR. With the emergence of a good CSR report, shareholders will be interested and consider adding their ownership in the company.

H₁: Shareholders influence *corporate social responsibility disclosure* (CSRSD)

The Influence of Employees on Corporate Social Responsibility Disclosure

Nowadays, employees participate in assessing and paying attention to whether the company where they work is a company that has good social responsibility or not. The results of research from Chandra et al., (2021) reveal that corporate social responsibility has an influence on employees where disclosure of corporate social responsibility can increase employee productivity.

H₂: Employees influence *corporate social responsibility disclosure* (CSRSD)

The Government's Influence on *Corporate Social Responsibility Disclosure*

Each company is required to issue a Corporate Social Responsibility Report as the responsibility of the company for its operational actions that have an impact on the community and the environment in the vicinity of the company's operations as regulated in Article 74 paragraph (1) of the Limited Liability Company Law (UUPT.) and Article 34 paragraph (3) of the Investment Law (UUPM). In research Winalza & Alfarisi (2021) state that government ownership has an influence on CSR. With 50% government ownership of a company, a company has a high tendency to carry out corporate social responsibility disclosure because the activities carried out by government-owned companies tend to be more sensitive so that they are more closely monitored by stakeholders.

H₃: The government influences *corporate social responsibility disclosure* (CSR)

The Effect of Media on *Corporate Social Responsibility Disclosure*

From the media, the public can participate in monitoring the activities of the company from whether they have taken the promised *corporate social responsibility* actions or what actions they will take in overcoming the impacts resulting from their business activities. Trijaya & Riswandari (2017) research shows the results that the media has an influence on CSR disclosure which can be seen when companies disclose their social activities directly on their official website, so it can make it easier for investors to know what social activities the company has done in a period.

H₄: Media influences *corporate social responsibility disclosure* (CSR)

Research methods

Population and Sample

The object of research used in this study are companies listed on the Indonesia Stock Exchange (IDX) in 2017-2021 for the financial year ending on December 31. Sample selection was carried out by *purposive sampling method* with sampling criteria, namely: (1) plantation companies listed on the Indonesia Stock Exchange in 2017-2021; (2) Companies that make *sustainability reports* stand alone in 2017-2021; (3) Companies that report financial statements after being audited and sustainability reports in a row for 2017-2021; (4) There is a GRI index in the sustainability report; (5) Companies that publish complete 2017-2021 sustainability reports. The total sample used is 5 companies using 5 years of financial statements and company sustainability reports so that the sample is 25 samples.

Results and Discussion

Descriptive Statistical Analysis

The results of descriptive statistical analysis show that the shareholder variable as a stakeholder shows a minimum value of 0.38 which represents Eagle High Plantation Tbk and a maximum value of 0.92 which represents Sinar Mas Agro Resources & Technology Tbk (SMART Tbk) and an average value of 0.6124 with standard deviation of 0.21826. The employee variable as a stakeholder shows a minimum value of 7,596 which represents Austindo Nusantara Jaya Tbk, a maximum value of 49,000 which represents Sinar Mas Agro Resources & Technology Tbk (SMART Tbk) with an average value of 27,106.88 and a standard deviation of 15,464.02. The government variable as a stakeholder displays a minimum value of 0 which represents Eagle High Plantation 2017-2018 and companies other than Eagle High Plantation, a maximum value of 1 which represents Eagle High Plantation Tbk in 2019-2021 with an average value of 0.12 and a standard deviation of 0.33. The media variable as a stakeholder displays a minimum value of 8 which represents Sinar Mas Agro Resources & Technology (SMART Tbk), a maximum value of 871 which represents Austindo Nusantara Jaya Tbk with an average value of 169.96 and a standard deviation of 223.793. The sustainability report disclosure index variable displays a minimum value of 0.31 which represents Sawit Sumbermas Sarana Tbk, a maximum value of 0.99 which represents Astra Agro Lestari Tbk with an average value of 0.5044 and a standard deviation of 0.14225.

Coefficient Similarity Test

The results of the coefficient test that have passed the test are above 0.05 (> 0.05) so that all of the data can be tested at once

Classic assumption test

The classical assumption test includes: normality test, multicollinearity test, autocorrelation test, heteroscedasticity test. Overall, the results of the classical assumption test have passed the test

Multiple Regression Analysis

The results show that the constant value is shown at 0.364, which means that if the independent variables are shareholders, employees, government, and the media $X = 0$, then the value of the sustainability report disclosure index is 0.364. Shareholders independent variable -0.008. The employee's independent variable is 0.364. The government's independent variable is -0.074. The media independent variable is 0.364.

$$\text{CSRD} = 0.364 - 0.008\text{PS} + 0.364\text{KA} - 0.074\text{PE} + 0.364\text{ME}$$

Coefficient of Determination Test (R^2)

From the test results, the value of R^2 (coefficient of determination) is at 0.326. From the previous criteria which stated that the R^2 value used was between 0 to 1, then according to the table, the variables in this study could be explained at 0.326 and the remaining 0.674 was explained by other factors not included in this study.

F Uji test

The model feasibility test was conducted to determine whether all of the independent variables in this study had an influence on the independent variables being tested. The results of the model feasibility test show that the sig result is at 0.083. Thus, the simultaneous F test does not affect the dependent variable ($0.083 > 0.05$).

t test

The test results show that the significant shareholder variable on *corporate social responsibility disclosure* is $0.491 > 0.05$, so the answer to the hypothesis is that H_{a1} is rejected and H_{01} is accepted, which means that there is no influence of shareholders as stakeholders on the disclosure of corporate social responsibility (CSR).

In the results of testing the employee variable on *corporate social responsibility disclosure* $0.208 > 0.05$, the hypothesis answer is H_{a2} is rejected and H_{02} is accepted, which means that there is no influence of employees as stakeholders on the disclosure of corporate social responsibility (CSR).

In the results of testing the government variable on *corporate social responsibility disclosure* $0.226 > 0.05$, the answer to the hypothesis is that H_{a3} is rejected and H_{03} is accepted, which means that there is no influence of employees as stakeholders on the disclosure of corporate social responsibility (CSR).

In the results of testing the media variable on *corporate social responsibility disclosure* $0.018 < 0.05$, the hypothesis answer is H_{a4} accepted and H_{04} rejected, which means that there is an influence of the media as a stakeholder on the disclosure of corporate social responsibility (CSR).

Discussion

Influence of Shareholders on *Corporate Social Responsibility Disclosure*

Based on the results of the tests that have been carried out, it shows that shareholders have no influence on *corporate social responsibility disclosure* to oil palm plantation companies ($0.491 > 0.05$). The results of this study are not in line with the research conducted by Hamdani et al. (2017), and Hitipeuw and Kuntari (2020) which state that shareholders influence the disclosure of corporate social responsibility.

The Influence of Employees on *Corporate Social Responsibility Disclosure*

Based on the results of the tests that have been carried out, it shows that employees have no influence on *corporate social responsibility disclosure* in oil palm plantation companies ($0.208 > 0.05$). The results of this study are not in line with the research conducted by Chandra et al. (2021) whose research results state that with the existence of *corporate social responsibility disclosure* it will be able to increase employee productivity. They are an important resource for companies in carrying out company activities

The Government's Influence on Corporate Social Responsibility Disclosure

Based on the results of the tests that have been carried out, it shows that the government has no influence on *corporate social responsibility disclosure* in oil palm plantation companies ($0.226 > 0.05$). The results of this study are in line with the research conducted by Winalza and Alfarisi (2021) which stated that with 50% government ownership of a company, a company has a high tendency to carry out *corporate social responsibility disclosure* because the activities carried out by government-owned companies tend to be more sensitive so that more monitored by stakeholders.

The Effect of Media on Corporate Social Responsibility Disclosure

Based on the results of the test, the media has a positive influence on *corporate social responsibility disclosure* in oil palm plantation companies ($0.018 > 0.05$). The results of this study are in line with research conducted by Trijaya and Riswandari (2017) , and Hitipeuw and Kuntari (2020) which state that the media has an influence on the disclosure of social responsibility. The media can be used as an intermediary for companies in reporting their CSR actions so that they can build trust with consumers.

Conclusions and suggestions

The results of this study indicate that there is sufficient evidence that the media has an influence on *corporate social responsibility disclosure* and there is not enough evidence that shareholders, employees, and the government have an influence on *corporate social responsibility disclosure* .

From the results of the discussion and conclusions that have been explained, the inputs and possibilities for companies to pay more attention to the disclosure of government stakeholders, employees and shareholders. If investors can consider the disclosure of government *stakeholders* , employees and shareholders. It is advisable for further researchers to be able to use other *stakeholder* variables where if they can have a simultaneous influence on CSRD, such as by replacing the shareholder variable with the institutional ownership variable.

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ENVIRONMENTAL ACCOUNTING DISCLOSURE OF MINING COMPANIES IN INDONESIA: CONTENT ANALYSIS APPROACH

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ABSTRACT

This research aims to see the disclosure of environmental accounting in mining companies in Indonesia based on the environmental performance indicators from the GRI (Global Reporting Initiative). The research method used was the context analysis through the descriptive approach, using the Nvivo12 software and the annual report and sustainability report 2014 - 2018 period. The result was founded that the environmental accounting disclosure for the annual report was 16.04%; meanwhile, the sustainability report was 32.26% based on the total of environmental accounting disclosure, the GRI's Environmental Performance indicator often disclosed in the annual report is material (42.28%), meanwhile, in the sustainability report is biodiversity (23.95%). In comparison, the least disclosed indicator in the annual report is water (2.28%), and for the sustainability report is supplier environmental assessment (6.41%).

Keywords: *Environmental Accounting, Disclosures, Mining Companies, GRI, Nvivo12.*

INTRODUCTION

Mining companies are one of the fields of companies whose operational activities directly contact the natural environment's activities. According to Law number 4 of 2009 article 1 paragraph 1 regarding mineral and coal mining states that mining is part or all of the stages of activities in the framework of research, management, and exploitation of minerals or coal, which includes general investigations, exploration, feasibility studies, construction, mining, processing and refining, transportation and sales, and post-mining activities. The emergence of environmental activities, causing additional costs that must be incurred by mining companies both related to the company's economic activities and corporate social responsibility to the community so that the *value of the firm* is adequately maintained. Emerging environmental costs can be managed using environmental accounting. Environmental accounting is a useful tool for assessing aspects of the supply of natural capital and their exploitation, including sustainable environmental costs, benefits received, and the resulting impacts (Häyhä, T., & Franzese, P. P., 2014). Waste and environmental pollution are widespread generated by the company. *Concern* on the environment was raised in many sciences, so every mining company must pay attention to the disclosure of environmental accounting information, especially in the *annual report* and *sustainability report*.

Disclosure about environmental accounting has not been regulated in the PSAK standard, meaning that it voluntarily reports its environmental accounting information. Explained in PSAK No. 1 of 2009, paragraph nine (9), which states:

"Companies can also provide additional reports such as reports on the environment and value-added statements (value-added statement), especially for industries where environmental factors play an important role and for industries that consider employees as the user group that reports an important role."

Disclosure of environmental accounting information for mining companies is presented in *annual reports of regulatory disclosure requirements* and *sustainability reports* that are *voluntary disclosures*. Both of these reports can be used as a tool for interested parties to assess how well the mining company is responsible for its operational activities' environmental impacts. One way to assess environmental accounting quality for mining companies is by using environmental performance indicators from the *Global Reporting Initiative (GRI)*. *GRI* indicators of environmental aspects consist of *material, energy, water, biodiversity, emissions, effluents and waste, environmental compliance, and supplier environmental assessment*.

Research on the impact of the disclosure of environmental accounting on the quality of the company's performance made by Clement Lamboi Arthur, et al., (2017), finding that happens good progress in sector positioned after disclosure of environmental accounting is voluntary based guidelines *GRI* to improve the transparency, credibility, and comparability in sustainability reporting.

Research discussing environmental accounting standards conducted by Sónia Maria da Silva Monteiro and Beatriz Aibar Guzmán (2010) shows that the level of environmental disclosure and the number of Portuguese companies that disclose environmental information has increased. This research is supported by research conducted by B Omnamasivaya and MSV Prasad (2016). They found that financial performance influences the practice of environmental accounting disclosure in India. This shows that it is essential for a company to disclose environmental accounting in its company reports to improve environmental performance and company value in society.

There have been many studies that discuss the application of environmental accounting. However, there is still little research on Indonesia's environmental accounting disclosure, especially in the mining sector, so this research was conducted to provide an overview of environmental accounting disclosures in mining companies in Indonesia. This research can also be used as a model for evaluating accounting information on corporate environments, especially in mining

RESEARCH METHODS

This study uses *content analysis* with a descriptive qualitative approach and uses Nvivo12 qualitative software tools. This approach is used because to observe the environmental accounting disclosures contained in the *annual report* and *sustainability report* based on the disclosure of data generated by the Nvivo12 application requires researchers to describe the words that have the highest level of disclosure and then explain the results of the best disclosure of all information disclosures environmental accounting for mining companies in Indonesia.

Sources of data that researchers use are secondary data. Secondary data was obtained from the *corporate website* in the *annual report* and *sustainability report* mining company. A source of books, journals, and other scientific papers also discusses research topics together. It was also obtained from a literature study on the *Global Reporting Initiative (GRI)* and its application.

This study's scope focuses on mining companies registered in the Indonesian securities sector with a limitation of research on the disclosure of environmental accounting information presented by the company according to *GRI's* environmental performance indicators.

Data collection methods by:

1. Study of literature

The study of literature is done by understanding the GRI performance indicators on the official website *GRI* www.globalreporting.org, reading and studying the book related to scientific writing to get the data about accounting information systems environment and disclosure. In addition to books, this procedure will also be carried out by reading and understanding journals, articles, documents, and other scientific papers that discuss environmental accounting information and previous studies.

2. Website visit

Website visits carried out there are two parts, among others

- a. Visit the website <http://idx.go.id> and *corporate website* to download the mining company's *annual report*
- b. Visit the corporate website to download the company's sustainability report.

Data analysis included determining "*keywords*" as a data boundary, then eliminating words that had little meaning to the 100 words most often expressed manually, then classifying words based on "*keywords*" that were predetermined based on *GRI* environmental performance indicators. The data analysis has then been classified based on the level of quantity of word disclosure in the *annual report* and the *sustainability report*. This method aims to describe the situation or phenomenon in each company so that it can be compared with other companies to assess which company has the best disclosure. In this study, the authors analyze and explain things related to the disclosure of environmental accounting information.

RESULTS AND DISCUSSION

The subjects of this study are mining companies listed on the Indonesian stock exchange. Mining companies listed on the Indonesian stock exchange consist of 42 companies and are divided into four mining sub-sectors, among others

1. Coal Mining Company

Coal is the mining sector that is mostly run by companies listed on the Indonesian stock exchange, which are as many as 23 companies, including:

Table 1
Coal Mining Company

No	Stock Code	Issuer's Name	IPO date	Corporate Website
1	ADRO	Adaro Energy Tbk.	July 16, 2008	www.adaro.com
2	APEX	Apexindo Pratama Duta Tbk.	July 10, 2002	www.apexindo.com
3	ARII	Atlas Resources Tbk.	November 8, 2011	www.atlas-coal.co.id
4	ATPK	Bara Jaya International Tbk.	April 17, 2002	www.barajayainternational.co.id
5	BORN	Borneo Lumbung Energy & Metal Tbk.	Nov 26, 2010	www.borneo.co.id
6	BSSR	Baramulti Suksessarana Tbk.	November 8, 2012	www.bssr.co.id
7	EARTH	Bumi Resources Tbk.	July 30, 1990	www.bumiresources.com
8	BYAN	Bayan Resources Tbk.	August 12, 2008	www.bayan.com

9	GOD	Darma Henwa Tbk.	September 26, 2007	www.ptdh.co.id
10	DOID	Delta Dunia Makmur Tbk.	June 15, 2001	www.deltadunia.com
11	FIRE	Alfa Energi Investama Tbk.	June 9, 2017	www.alfacentra.com
12	GEMS	Golden Energy Mines Tbk.	November 17, 2011	www.goldenenergymines.com
13	GTBO	Garda Tujuh Buana Tbk.	July 9, 2009	www.gtb.co.id
14	HRUM	Harum Energy Tbk.	October 6, 2010	www.harumenergy.com
15	ITMG	Indo Tambangraya Megah Tbk.	December 18, 2007	www.itmg.co.id
16	KKGI	Resource Alam Indonesia Tbk.	July 1, 1991	www.raintbk.com
17	MBAP	Mitrabara Adiperdana Tbk.	July 10, 2014	www.mitrabaraadiperdana.co.id
18	MYOH	Samindo Resources Tbk.	July 27, 2000	www.samindoresources.com
19	PKPK	Perdana Karya Perkasa Tbk.	July 11, 2007	www.pkpk-tbk.co.id
20	PTBA	Bukit Asam Tbk.	December 23, 2002	www.ptba.co.id
21	PTRO	Petrosea Tbk.	May 21, 1990	www.petrosea.com
22	SMMT	Golden Eagle Energy Tbk.	February 29, 2000	www.go-eagle.co.id
23	TOBA	Toba Bara Sejahtera Tbk.	July 6, 2012	www.tobabara.com

Source: Data processed (2019)

2. Oil and Gas Mining Companies

Companies in the oil and gas mining sector listed on the Indonesian stock exchange include:

Table 2
Oil and Gas Mining Companies

No	Stock code	Issuer's Name	IPO date	Corporate website
1	MEANING	Ratu Prabu Energi Tbk.	April 30, 2003	www.ratuprabuenergi.com
2	BIPI	Astrindo Nusantara Infrastruktur Tbk.	February 11, 2010	www.astrindonusantara.com
3	ELSA	Elnusa Tbk.	February 6, 2008	www.elnusa.co.id
4	ENRG	Energi Mega Persada Tbk.	June 7, 2004	www.emp.id
5	ESSA	Surya Esa Perkasa Tbk.	February 1, 2012	www.sep.co.id
6	MEDC	Medco Energy International Tbk.	October 12, 1994	www.medcoenergi.com
7	RUIS	Radiant Utama Interinsco Tbk.	July 12, 2006	www.radiant.co.id

Source: Data processed (2019)

3. Metal and Mineral Mining Company

Metal and mineral mining companies listed on the Indonesian stock exchange include:

Table 3
Metal and Mineral Mining Companies

No	Stock code	Issuer's Name	IPO date	Corporate website
1	ANTM	Aneka Tambang Tbk.	November 27, 1997	www.antam.com
2	CITA	Cita Mineral Investindo Tbk.	March 20, 2002	www.indonesia-investments.com
3	CKRA	Cakra Mineral Tbk.	May 19, 1999	www.ckra.co.id
4	DKFT	Central Omega Resources Tbk.	November 21, 1997	www.centralomega.com
5	INCO	Vale Indonesia Tbk.	May 16, 1990	www.vale.com
6	MDKA	Merdeka Copper Gold Tbk.	June 19, 2015	www.merdekakoppergold.com
7	PSAB	J Resources Asia Pacific Tbk.	December 1, 2007	www.jresources.com
8	SMRU	SMR Utama Tbk.	October 10, 2011	www.smrutama.com

9	TINS	Timah Tbk.	October 19, 1995	www.timah.com
10	ZINC	Kapuas Prima Coal Tbk.	October 16, 2017	www.kapuasprima.co.id

Source: Data processed (2019)

4. Rock Mining Company

Companies in the field of rock mining listed on the Indonesian stock exchange include:

Table 4

Rock Mining Company

No	Stock code	Issuer's Name	IPO date	Corporate website
1	CTTH	Citatah Tbk.	March 7, 1996	www.citatah.co.id
2	MITI	Mitra Investindo Tbk.	July 16, 1997	www.mitra-investindo.com

Source: Data processed (2019)

All data consisting of *annual reports* and *sustainability reports* are classified into Nvivo12 *internal resources*, into eight contents according to GRI's environmental performance indicators: material, energy, water, biodiversity, emissions, effluents and waste, and *environmental compliance, supplier environmental assessment*. However, the rest of the content included in the criteria included in the *other*, so total, there are nine indicators.

The results of data exploration using Nvivo12 show that each content has *keywords* with different themes. After the grouping process, the next 100 most frequently revealed themes are grouped into nine environmental performance indicators. Here in Table 5 of grouping the theme of *the keyword* on the analysis of *word frequency* into nine-category:

Table 5

Content Analysis Categories

No	Performance indicator	Category	Keyword
1	<i>Material</i>	The material used is based on weight or volume	Material, <i>resource</i> , volume, product, production, reserve, inventory, unit, ore, goods
		Input material from recycling used	
		Reclaimed products and packaging materials	
2,	<i>Energy</i>	Energy consumption in the inside and outside of the organization	Consumption, energy, fuel oil (BBM), power, ratio. Reduction, electricity
		Energy intensity	
		Reduction in energy consumption	
		Reduction in energy needed for products and services	
3	<i>Water</i>	Water collection based on sources	Water, sources, extraction
		Water sources are significantly affected by water withdrawals	
		Recycle and reuse water	
4	<i>Biodiversity</i>	Operational locations that are owned, leased, managed, or adjacent to protected areas and areas of high biodiversity value outside protected areas	Location, owned, leased, managed, area, diversity, biodiversity, habitat, protected, restoration species, land, environment, earth
		The significant impact of activities, products, and services on biodiversity	
		Protected or restored habitat	
		IUCN Red List species and national conservation register species with habitats in areas affected by operations	
5	<i>Emissions</i>	Direct GHG emissions (Scope 1)	Emissions, reductions, substances, destroyers, ozone, gas, CSR, yields, sustainability
		GHG energy emissions (Coverage 2) are indirect	
		Other indirect GHG emissions (Coverage 3)	

		The intensity of GHG emissions	
		GHG emission reduction	
		Emissions of ozone-depleting substances (ODS)	
		Nitrogen oxides (NOX), sulfur oxides (SO _x), and air emissions are significantly more	
6	<i>Effluents and Waste</i>	Release of water-based on quality and purpose	Release, quality, waste, disposal, risk, spillage. Dangerous
		Waste by type and method of disposal	
		Significant spills	
		Transport of hazardous waste	
		Water bodies that are affected by the release and overflow of water	
7	<i>Environmental Compliance</i>	Non-compliance with environmental laws and regulations	Non-compliance, laws, regulations, complaints, safety, accidents, policies, standards, PSAK, GRI, ISO, law
8	<i>Supplier Environmental Assessment</i>	Selection of new suppliers using environmental criteria	Supplier, value, chain
		Negative environmental impacts in the supply chain and actions taken	
9	<i>Other</i>	Business Overview	Profile, company, mining, stakeholders, accounts of financial statements, news, activities
		Financial Information	
		Company Ownership Information	

Source: Data processed (2019)

Based on data from 196 study *annual reports* and 21 *sustainability reports*, the result of word frequency disclosure using Nvivo12 contains 17,545,254 of 196 words *annual report*. There are 889 551 words in the 21 *sustainability report* mining company disclosed. Then the *keyword* elimination is done and selected into 100 words with the highest level of disclosure of each company. The total number of words collected from the *annual report* is **2 . 5 63,456** or **14.61%** of 17,545,254 words and compiled from the *sustainability report* of **15 3,865** or **17.29%** 889,551 words.

After being classified into nine performance indicators, elimination is carried out again on the other indicators' words. Only the remaining words enter into the 8 *GRI* environmental performance indicators. In the *annual report*, the words that entered the indicators *of* and carried elimination as much as 2 .152.272 words so that the words are entered into the eight indicators of environmental performance *GRI* as many as 411 184 or 16.04% said the disclosure of the second. 5 63,456 words of the complete data source. In contrast, in the *sustainability report*, the words included in *other* indicators and eliminated were 104. Two hundred thirty-six words that enter into eight indicators of *GRI* environmental performance are 49,629 words or 32.26% disclosure from 153. 865 words total data source.

Nvivo12 data analysis showed that the *material* is the most frequent content disclosed in the *annual report* with the disclosure of 173 836 or 42.28% of the 411 184 196 words in the *annual report*, while content is most often expressed in the *sustainability report* is *biodiversity* with the disclosure of 1 1,888 or 23.95% of 49,629 words in 21 *sustainability reports*. The following details the percentage disclosure of 8 *GRI* environmental performance indicators :

Table 6
Disclosure of *GRI* Environmental Performance Indicators

<i>Annual Report</i>				<i>Sustainability Report</i>			
No	Performance Indicator	Disclosure		No	Performance Indicator	Disclosure	
		amount	Percentage			amount	Percentage
1	Material	173,836	42.28%	1	Biodiversity	11,888	23.95%

2	Supplier Environmental Assessment	71,778	17.46%
3	Biodiversity	45,198	10.99%
4	Emissions	30,453	7.41%
5	Energy	30,423	7.40%
6	Effluence and Waste	29,958	7.29%
7	Environmental Compliance	20,018	4.87%
8	Water	9,358	2.28%
Total		411,184	100%

2	Material	10,059	20.27%
3	Effluence and Waste	7,251	14.61%
4	Environmental Compliance	4,977	10.03%
5	Emissions	4,623	9.32%
6	Water	3,916	7.89%
7	Energy	3,733	7.52%
8	Supplier Environmental Assessment	3,182	6.41%
Total		49,629	100%

Based on data that has been processed, environmental accounting disclosures are then performed on each company, which is then used to assess environmental accounting disclosures made by mining companies. Researchers coding data to assess companies with the best and worst disclosures. The code used in the form of color that means a number that is red means disclosure below the average or lower at least 1% with a value of 1, yellow means disclosure approaching the average and a maximum difference of 1% with a value of 2, green means above the average with value 3.

Assessing Environmental Accounting Disclosures in Mining Company Annual Reports

Environmental accounting in the annual report of mining companies in Indonesia are disclosed at 411,184 words or 16.04 % disclosure from 2 . 5 63,456 words of the whole data source. Following is a discussion of environmental accounting disclosures in each mining company :

1. Coal Mining Company

Based on Table 6 word frequency analysis, environmental accounting disclosures according to GRI environmental performance indicators for 23 coal mining companies amounted to 235,004 words; the percentage of disclosure level is presented in Table 7 as follows:

Table 7. Disclosure of Environmental Accounting in the Annual Report of the Coal Mining Company

No	Stock code	Material	Energy	Water	Biodiversity	Emissions	Effluence and Waste	Environmental Compliance	Environmental Assessment Supplier	Total	Value Points
1	ADRO	9.305	4.469	482	743	0	1.287	940	3.601	20.827	16
		44.68%	21.46%	2.31%	3.57%	0.00%	6.18%	4.51%	17.29%	100%	
2	APEX	0	973	208	514	304	455	929	1.424	4.807	20
		0.00%	20.24%	4.33%	10.69%	6.32%	9.47%	19.33%	29.62%	100%	
3	ARII	5.420	789	204	1.327	0	775	204	1.620	10.339	15
		52.42%	7.63%	1.97%	12.83%	0.00%	7.50%	1.97%	15.67%	100%	
4	ATPK	3.957	264	205	551	0	653	773	1.460	7.863	16
		50.32%	3.36%	2.61%	7.01%	0.00%	8.30%	9.83%	18.57%	100%	
5	BORN	1.453	465	0	0	44	152	260	47	2.421	14
		60.02%	19.21%	0.00%	0.00%	1.82%	6.28%	10.74%	1.94%	100%	
6	BSSR	2.956	283	173	188	396	369	672	774	5.811	16
		50.87%	4.87%	2.98%	3.24%	6.81%	6.35%	11.56%	13.32%	100%	
7	EARTH	10.367	2.417	1270	4.756	3039	5.079	0	2.635	29.563	18
		35.07%	8.18%	4.30%	16.09%	10.28%	17.18%	0.00%	8.91%	100%	
8	BYAN	6.412	0	319	2.104	0	1.765	618	2.234	13.452	17
		47.67%	0.00%	2.37%	15.64%	0.00%	13.12%	4.59%	16.61%	100%	
9	GOD	4.011	988	410	1.262	1.757	2213	483	1.807	12.931	18
		31.02%	7.64%	3.17%	9.76%	13.59%	17.11%	3.74%	13.97%	100%	

10	DOID	4.214	217	0	648	557	977	851	2.151	9.615	16
		43.83%	2.26%	0.00%	6.74%	5.79%	10.16%	8.85%	22.37%	100%	
11	FIRE	1.287	1.132	0	328	0	406	1.020	532	4.705	12
		27.35%	24.06%	0.00%	6.97%	0.00%	8.63%	21.68%	11.31%	100%	
12	GEMS	5.414	194	0	1.435	229	906	0	2.203	10.381	14
		52.15%	1.87%	0.00%	13.82%	2.21%	8.73%	0.00%	21.22%	100%	
13	GTBO	2.297	181	0	644	93	598	356	860	5.029	17
		45.68%	3.60%	0.00%	12.81%	1.85%	11.89%	7.08%	17.10%	100%	
14	HRUM	2.280	0	0	753	0	930	1.248	1.185	6.396	16
		35.65%	0.00%	0.00%	11.77%	0.00%	14.54%	19.51%	18.53%	100%	
15	ITMG	7.034	746	0	1.576	450	2.862	1.868	2.820	17.356	14
		40.53%	4.30%	0.00%	9.08%	2.59%	16.49%	10.76%	16.25%	100%	
16	KKG1	3.878	761	324	1.677	258	732	1.449	3.790	12.869	16
		30.13%	5.91%	2.52%	13.03%	2.00%	5.69%	11.26%	29.45%	100%	
17	MBAP	2.350	457	164	250	372	899	265	464	5.221	18
		45.01%	8.75%	3.14%	4.79%	7.13%	17.22%	5.08%	8.89%	100%	
18	MYOH	2.311	0	212	1.006	256	978	1.109	988	6.860	17
		33.69%	0.00%	3.09%	14.66%	3.73%	14.26%	16.17%	14.40%	100%	
19	PKPK	82	40	0	193	83	188	247	467	1.300	18
		6.31%	3.08%	0.00%	14.85%	6.38%	14.46%	19.00%	35.92%	100%	
20	PTBA	10.037	1.124	634	1.569	561	1.947	496	5.049	21.417	14
		46.86%	5.25%	2.96%	7.33%	2.62%	9.09%	2.32%	23.57%	100%	
21	PTRO	1.900	976	0	401	1.000	1.545	1.204	2.279	9.305	18
		20.42%	10.49%	0.00%	4.31%	10.75%	16.60%	12.94%	24.49%	100%	
22	SMMT	2.049	235	270	467	489	748	473	1.751	6.482	17
		31.61%	3.63%	4.17%	7.20%	7.54%	11.54%	7.30%	27.01%	100%	
23	TOBA	3.711	975	381	1.347	0	862	688	2.090	10.054	17
		36.91%	9.70%	3.79%	13.40%	0.00%	8.57%	6.84%	20.79%	100%	
Total		92.725	17.686	5.256	23.739	9.888	27.326	16153	42.231	235.004	
Disclosure rate		39.46%	7.53%	2.24%	10.10%	4.21%	11.63%	6.87%	17.97%	100%	

Source: Data processed (2019)

Based on the analysis of environmental accounting disclosures in the coal mining company, it can be concluded that environmental performance indicators of GRI who have the best level of the disclosure are a *material* where the average disclosures in the *annual report* amounted to 39.46 %. The worst level of disclosure is *water*, with the mean average disclosure is only 2.24%. The companies that make the best disclosures in coal mining are companies with an **APEX** stock code that accumulates 20 points out of 24 points. The worst disclosures are made by companies with **FIRE** share codes with a value point of 12 out of 24.

2. Oil and Gas Mining Companies

Based on *word frequency* analysis data, environmental accounting disclosures according to *GRI's* environmental performance indicators for oil and gas mining companies are **61,552** words, per calculation of the percentage of disclosures presented in Table 8, as follows:

Table 8

Disclosure of Environmental Accounting in the *Annual Report* of Oil and Gas Mining Companies

No	Stock code	Material	Energy	Water	Biodiversity	Emissions	Effluence and Waste	Environmental Compliance	Environmental Assessment Supplier	Total	Value Points
1	MEANING	378	455	0	46	227	73	73	77	1.329	16
		28.44%	34.24%	0.00%	3.46%	17.08%	5.49%	5.49%	5.79%	100%	
2	BIPI	3.464	379	446	432	1.126	0	267	1.692	7.806	16
		44.38%	4.86%	5.71%	5.53%	14.42%	0.00%	3.42%	21.68%	100%	
3	ELSA	6.258	533	0	678	0	0	349	599	8.417	12
		74.35%	6.33%	0.00%	8.06%	0.00%	0.00%	4.15%	7.12%	100%	
4	ENRG	8.124	2.028	0	2.095	1.804	350	328	1.754	16.483	18
		49.29%	12.30%	0.00%	12.71%	10.94%	2.12%	1.99%	10.64%	100%	
5	ESSA	1.679	583	153	1.018	910	0	153	0	4.496	17
		37.34%	12.97%	3.40%	22.64%	20.24%	0.00%	3.40%	0.00%	100%	
6	MEDC	7.564	4.353	0	1.433	1.143	0	233	3.101	17.827	13
		42.43%	24.42%	0.00%	8.04%	6.41%	0.00%	1.31%	17.39%	100%	
7	RUIS	1.971	148	0	186	701	0	301	1.887	5.194	14
		37.95%	2.85%	0.00%	3.58%	13.50%	0.00%	5.80%	36.33%	100%	
Total		29.438	8.479	599	5.888	5.911	423	1.704	9.110	61.552	
Disclosure Average		47.83%	13.78%	0.97%	9.57%	9.60%	0.69%	2.77%	14.80%	100%	

Source: Data processed (2019)

Based on the results of the analysis of environmental accounting disclosures in mining companies oil and gas, it can be concluded that environmental performance indicators of *GRI* who has the best level of the disclosure are a *material* where the average disclosures in the *annual report* amounted to 47.83 % and the worst level of disclosure was *effluents and waste* with an average disclosure of only 0.69%. The companies that make the best disclosures in oil and gas mining are the companies with **ENRG**, which collect 18 out of 24 points. Companies make the worst disclosures with the **ELSA** stock code with 12 out of 24.

3. Metal and Mineral Mining Company

Based on the data analysis of *word frequency*, the disclosure of environmental accounting appropriate environmental performance indicators *GRI* on metals and mineral mining companies amounted to **107 886** words, calculate the percentage of disclosures presented in Table 9, as follows :

Table 9
Disclosure of Environmental Accounting in the *Annual Report* of Metal and Mineral Mining Companies

No	Stock code	Material	Energy	Water	Biodiversity	Emissions	Effluence and Waste	Environmental Compliance	Environmental Assessment Supplier	Total	Points Score
1	ANTM	23.507	1.259	1.251	2.520	3.840	1.163	0	6.088	39.628	15
		59.32%	3.18%	3.16%	6.36%	9.69%	2.93%	0.00%	15.36%	100%	
2	CITA	2.243	201	214	2.388	698	221	0	2.009	7.974	16
		28.13%	2.52%	2.68%	29.95%	8.75%	2.77%	0.00%	25.19%	100%	
3	CKRA	651	0	0	0	148	96	0	696	1.591	12
		40.92%	0.00%	0.00%	0.00%	9.30%	6.03%	0.00%	43.75%	100%	
4	DKFT	3.163	0	0	663	526	0	0	1.076	5.428	13
		58.27%	0.00%	0.00%	12.21%	9.69%	0.00%	0.00%	19.82%	100%	
5	INCO	6.015	378	400	1.534	2.345	0	768	2.607	14.047	16
		42.82%	2.69%	2.85%	10.92%	16.69%	0.00%	5.47%	18.56%	100%	
6	MDKA	3.265	277	633	1.304	354	0	177	806	6.816	18
		47.90%	4.06%	9.29%	19.13%	5.19%	0.00%	2.60%	11.83%	100%	
7	PSAB	2.637	101	137	1.631	670	92	0	2.035	7.303	13
		36.11%	1.38%	1.88%	22.33%	9.17%	1.26%	0.00%	27.87%	100%	
8	SMRU	1.132	76	87	365	199	0	164	115	2.138	18
		52.95%	3.55%	4.07%	17.07%	9.31%	0.00%	7.67%	5.38%	100%	
9	TINS	6.699	867	781	2.971	5.007	0	454	4.271	21.050	20
		31.82%	4.12%	3.71%	14.11%	23.79%	0.00%	2.16%	20.29%	100%	
10	ZINC	467	56	0	411	290	65	0	622	1.911	17
		23.46%	2.81%	0.00%	20.64%	14.57%	3.26%	0.00%	31.24%	100%	
Total		49.779	3.215	3.503	13.787	14.077	1.637	1.563	20.325	107.886	
Disclosure Average		46.14%	2.98%	3.25%	12.78%	13.05%	1.52%	1.45%	18.84%	100%	

Source: Data processed (2019)

Based on the results of the analysis of environmental accounting disclosure in the mining of metals and minerals, it can be concluded that environmental performance indicators of *GRI* who has the best level of the disclosure are a *material* where the average disclosures in the *annual report* amounted to 46.14 % and the worst level of disclosure is *environmental compliance* den gan average expression of 1.45%. The companies that make the best disclosures in the metal and mineral mining sector are companies with **TINS** stock codes that collect 20 out of 24 points. Companies make the worst disclosures with **CKRA** stock codes with 12 out of 24 points.

4. The Rock Company

Based on *word frequency* analysis data, environmental accounting disclosures according to *GRI's* environmental performance indicators for rock mining companies are **6,742** words, per percentage of disclosure percentage is presented in Table 10, as follows :

Table 10
Disclosure of Environmental Accounting in the *Annual Report* of the Rock Mining Company

No	Stock code	Material	Energy	Water	Biodiversity	Emissions	Effluence and Waste	Environmental Compliance	Environmental Assessment Supplier	Total	Value Points
1	CTTH	847	0	0	1104	282	0	604	112	2949	18
		28.72%	0.00%	0.00%	37.44%	9.56%	0.00%	20.48%	3.80%	100%	
2	MITI	1.047	1043	0	680	295	572	156	0	3793	12
		27.60%	27.50%	0.00%	17.93%	7.78%	15.08%	4.11%	0.00%	100%	
Total		1,894	1,043	0	1,784	577	572	760	112	6,742	
Disclosure Average		28.09%	15.47%	0.00%	26.46%	8.56%	8.48%	11.27%	1.66%	100%	

Source: Data processed (2019)

Based on the results for information in environmental accounting on mining companies cobblestones, GRI's environmental performance indicators, which have the best disclosures, are *material* to an average disclosure of 28.09 %. The worst disclosure is *water*, with an average disclosure only at 0%. The companies that make the best disclosures are companies with **CTTH** stock codes that collect 18 value points out of 24 points. The worst disclosures are made by companies with **MITI** stock codes with 12 value points out of 24.

Assessing Disclosure of Accounting Environment p No Sustainability Report Mining Company

The environmental accounting for the *sustainability report* of mining companies in Indonesia is expressed as **49,629** words or **32.26 %** of 153,865 words of data sources based on the calculation of 100 words per company *annual report*. Based on the data analysis of *word frequency* in the *sustainability report*, environmental accounting disclosure of data on the *sustainability report* using the percentage count of disclosure is presented in Table 11, as follows :

Table 11
Disclosure of Environmental Accounting in *Sustainability Reports* of All Mining Companies

No	Stock code	Material	Energy	Water	Biodiversity	Emissions	Effluence and Waste	Environmental Compliance	Environmental Assessment Supplier	Total	Value Points
1	EARTH	1343	169	404	1313	499	443	219	248	4638	16
		28.96%	3.64%	8.71%	28.31%	10.76%	9.55%	4.72%	5.35%	100%	
2	PTRO	234	235	196	577	286	265	357	248	2398	20
		9.76%	9.80%	8.17%	24.06%	11.93%	11.05%	14.89%	10.34%	100%	
3	ELSA	947	459	195	623	120	69	668	49	3130	16
		30.26%	14.66%	6.23%	19.90%	3.83%	2.20%	21.34%	1.57%	100%	
4	MEDC	167	404	173	444	565	167	273	321	2514	16
		6.64%	16.07%	6.88%	17.66%	22.47%	6.64%	10.86%	12.77%	100%	
5	ANTM	5623	1212	1791	5680	1955	5073	2441	1201	24976	14
		22.51%	4.85%	7.17%	22.74%	7.83%	20.31%	9.77%	4.81%	100%	
6	INCO	906	757	509	1616	517	1084	648	712	6749	17
		13.42%	11.22%	7.54%	23.94%	7.66%	16.06%	9.60%	10.55%	100%	
7	TINS	839	497	648	1635	681	150	371	403	5224	18
		16.06%	9.51%	12.40%	31.30%	13.04%	2.87%	7.10%	7.71%	100%	
Total safety		10,059	3,733	3,916	11,888	4,623	7,251	4,977	3,182	49629	
Disclosure Average		20.27%	7.52%	7.89%	23.95%	9.32%	14.61%	10.03%	6.41%	100%	

Based on the results of the analysis of environmental accounting disclosures in 7 mining companies disclose *sustainability report*, it can be concluded that environmental performance indicators of *GRI* who has the best level of the disclosure are *biodiversity* where the average disclosures in the *sustainability report* amounted to 23.95 % and the worst level of disclosure is the *supplier of environmental assessment* with an average disclosure of only 6.41%. The mining companies that make the best disclosures are the companies with **PTRO** that collect 20 points out of 24 points. The worst disclosures are made by companies with **ANTM** stock codes with a point value of 14 out of 24. The study found a low level of environmental accounting disclosure based on *GRI* environmental performance indicators in the *annual report*. In contrast, the *sustainability report* has the right level of environmental accounting

disclosure. Disclosure of environmental accounting information is significant for mining companies as a tool for environmental management and communication tools with the community to increase the *firm's value*.

CONCLUSION

The results showed that 42 companies during the 2014-2018 period presented an *annual report* of 196 reports or 96.07% of 204 reports, and *sustainability reports* were 21 reports or 10.29% of 204 reports. The results find a low level of disclosure of environmental accounting-based performance indicators neighborhood of *GRI* in the *annual report* that disclosed by 16.04%, whereas in the *sustainability report* disclosure level of environmental accounting are classified as useful disclosed by 32.26%. Based on the total disclosure of environmental accounting, the *GRI's* environmental performance indicators are most often expressed in the annual report because it amounted to 42.28 %. In contrast, in the sustainability report, *biodiversity* amounted to 23.95 %. However, indicators fewest disclosed in the *annual report* are *water* amounted to 2.28 %. In comparison, the *sustainability report* is a *supplier environmental assessment* of 6.41 %.

Disclosure of environmental accounting in each mining sector's annual report shows that the company that revealed the best accounting in the coal sector was APEX. The oil and gas sector was ENRG, the metal and mineral sector was TINS, and the rocks field was CTTH. While the worst disclosure in coal is FIRE, the oil and gas sector is ELSA, the metal, and the mineral sector is CKRA, and the rocks field is MITI. The best environmental accounting disclosures in *sustainability reports* are PTRO companies, and the worst is ANTM companies. Disclosure of environmental accounting information is essential for mining companies as a means of environmental management and a tool of communication with the community as a form of corporate responsibility towards the environment to increase the firm's value in the community.

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Environmental Spending, Human Development, Regional Economy, and Environmental Quality: Evidence from the Provincial Regions in Indonesia

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Abstract

Indonesia has a great concern in maintaining environmental quality due to the high vulnerability from environmental degradation. Our paper investigates the determinants of environmental quality in Indonesian provincial regions. We collect secondary data from the Central Statistics Bureau that generates 204 observations from 34 Indonesian provincial regions during 2015-2020 research period analyzed with panel data regression. Our analysis find that the environmental quality in Indonesia during 2015-2020 is good enough. Despite having fluctuation trend during the research period, the environmental quality score in 2020 finally reaches the “good” category. Further, the empirical findings from panel data regression analysis demonstrate that better environmental quality is influenced by greater government environmental spending and higher regional human development quality. On the other hand, economic activity has negative effect on environmental quality while industrial activity and economic growth have no significant effect. The study provides implications for the policymakers in Indonesia specifically in environmental protection efforts. The government should have proper allocation for environmental spending in accordance with the environmental threat and circumstances faced by the regions. Meanwhile, the people should also participate in environmental protection that requires support and education from the related parties such as government agencies and NGOs. In addition, the effort to balance the economic activities and environmental protection is also essential especially to minimize the environmental threats that result from economic activities.

Keywords: *Indonesia, environmental quality, environmental spending, regional economy, human development*

Introduction

Indonesia has been regarded as one of the countries that suffer from the environmental threat. Therefore, Indonesia has put the environmental protection as one of the main focus in the national development plan. The country is committed to the realization of continuous improvement of environmental quality to support the sustainable development goals. However, the fact shows that Indonesia suffers from environmental issues indicated by several statistics. Indonesia is ranked 97th in the sustainable development report 2020 with the score of 66.3 (Sachs, et al., 2021). The data from Indonesia Central Statistics Bureau (BPS) also confirm that the environmental quality in Indonesia is still at medium level (BPS, 2021). Also, based on the data from IQAir report (2021), Indonesia is included in the top 10 of the countries with the worst air quality in the world. As compared to the other countries in the ASEAN region, Indonesia is the worst.

Indonesia has unique characteristics as the largest archipelago country in the world with considerably large population (Saragih, 2022). Indonesia has a great amount of natural resources and rich natural biodiversity that are subject to environmental exploitation (Kartiasih, 2020). Therefore, Indonesia faces significant environmental degradation threat. The environmental degradation issue in Indonesia appears in the form of pollution (Surya, et al., 2020), deforestation (Austin, et al., 2019), and waste management (Meidiana & Gamse, 2010) that threaten the environmental quality. Indeed, the data from the Central Statistics Bureau of Indonesia (BPS) also shows that the environmental quality in Indonesia is still within medium category for the past several years. Therefore, the environmental quality issues should be mitigated to preserve the environment to support the sustainable development goals so that the future generations can still have proper quality of living with a good and healthy environment.

The issues discussed above underlies the need for further studies that provide an insight for dealing with the environmental management in Indonesia supported by empirical evidences. There are several studies in the literature that examine environmental quality issues in Indonesia. However, there is still a gap in the literature. Firstly, there is limited studies in the literature that explores the environmental quality in the regional governments in Indonesia as the country has 34 provinces that have regional dynamics, characteristics, and experience different circumstances. Further, there are also several factors that remain less explored by previous studies such as the government's effort in managing the environment, people's characteristics, and regional economy.

The effort undertaken by the government in order to realize good life for the people is very crucial (Saragih, 2022), including the environmental quality. Based on the applicable Laws, the government is mandated to preserve the environment, both at the central government level through the ministry and the regional government level through the regional agency. However, this factor is not vastly explored in the previous studies in Indonesian context, specifically at the regional level in all Indonesian provinces. The government runs various programs for environmental protection and quality improvement using public money from the state budget (Azwardi, 2022). However, the effort of the government is often criticized following the low allocation of budget for important activities in environmental protection (Damanhuri, et al., 2020). Therefore, the government effort in environmental protection is important to be investigated further to see how it has contributed to environmental quality. It is also essential to ensure that public money is used properly by the government to accomplish the realization of good environmental quality for the people.

The characteristics of the people are also potential factors that may matter for environmental quality that are also less explored until the regional level in the whole Indonesian regions. The people are directly related to the activities that affect the environment quality (Parker, et al., 2018). Thus, the characteristics of the people must have supporting characteristics to help realize good environmental quality. Unfortunately, the people in Indonesia are considered to have bad behavior related to the environment (Dhahir, 2020). Therefore, the factor from the people becomes very interesting to investigate in relation with environmental quality, specifically in regional level in all Indonesian provinces.

In addition, Indonesia is also a country with a considerably high economic activities. It is generally accepted that economic activities have contributed to the development of a country. However, economic activities have a threatening effect on the environment if they are not counterbalanced with good environmental protection efforts (Farabi & Abdullah, 2020). In regard with this, Indonesia is fully committed to support sustainable development so that the economic activities is expected to run well without having significant harm to the environment. Therefore, economic factors are also interesting to be investigated in a deeper research that reaches regional level in the whole Indonesian regions.

The study contributes to the literature by extending the examination of environmental quality determinants in Indonesia up to the regional level. The study also brings more insights

related to the factors that are less explored in the previous Indonesian studies in environmental quality issues with empirical analysis. The factors consist of the regional government environmental spending that represents environmental protection efforts, human development that reflects people's characteristic, and several factors from the regional economy such as economic activity, growth, and industrial intensity. The remainder of the paper is presented as follows: review of literature, research method, results and discussion, and conclusion.

Review of Literature

Environmental Quality in Indonesia

The environment is one of the most important aspect for human well-being. Therefore, the environment has a great significance in the world and has establish itself as one of the main pillars of sustainability to achieve global sustainable development concepts of SDGs. There are four goals in the environmental pillars that are crucially important for other goals' realization under the economic and social pillars. In this regards, the realization of other goals cannot be achieved without good environmental quality. The awareness of people over environmental quality actually arises since they start to feel the effect of environmental degradation as a result of exploitation for economic purposes. Many issues start to change the quality of life such as climate change, global warming, biodiversity and natural resources degradation. This happens to a lot of countries, including Indonesia.

Indonesia is one of the richest country in the world in terms of natural resources thanks to being the largest archipelago country in the world. Indonesia is gifted with a lot of advantages in environmental point of view such as having one of the largest forest areas, vast biodeversities, and other various natural resources that have a great economic potential. Like many other countries, Indonesia also experiences significant issues related to environmental quality due to excessive economic activities and large population. Indonesia appears in the form of pollution, deforestation, and waste management. As many countries in the world have agenda to improve envrionmental quality (Lohnert & Geist, 2018), the government of Indonesia also concerns on the environmental quality as one of the top priorities for national development. This opens the opportunity for studies in the field of environmental quality in Indonesian context for the sake of supporting the development.

Research Framework

This research aims to analyze the determinants of environmental quality in Indonesia under the factors of regional government environmental spending, human development, and regional economy factors by providing empirical evidence. The research framework is presented in the following figure:

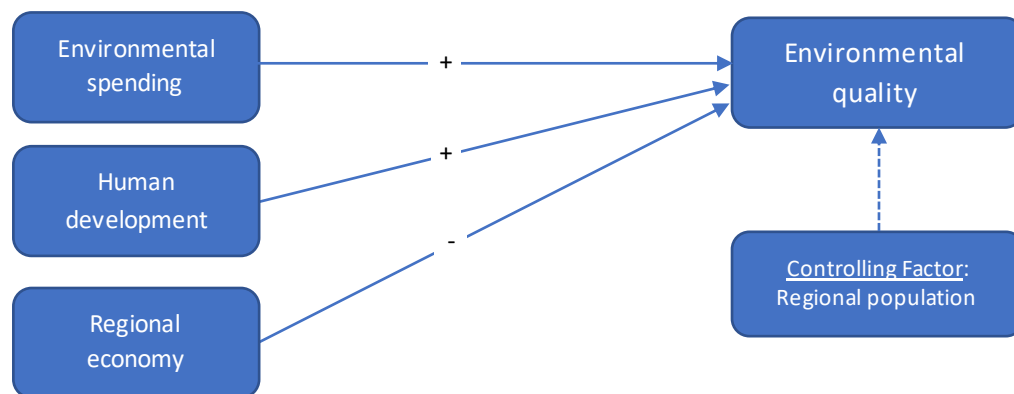


Figure 1. Research Framework

Hypothesis Development

Environmental spending and environmental quality

The government is undeniably inseparable party that is responsible for the circumstances environmental quality (Azwardi, et al., 2022). The government is a manifestation of a body entrusted by the public in public affairs (Amidjaya & Widagdo, 2019), including in dealing with environmental aspects. In Indonesia, the government from the central to regional level are mandated to implement environmental function through specific programs. Since the decentralization, the regional government holds significant role for regional development, including the environmental context mandated by the Law Number 23 of 2014 concerning regional government. The regional government manages the spending budget and set specific allocation for implementing environmental function (Azwardi, et al., 2022). The government spending can be seen as the government effort in performing its function (Saragih, 2022). Thus, the environmental spending manifests the effort of regional government to preserve the environment. The larger allocation of spending for environmental function is expected to support the environmental protection efforts by providing better funding for the implementation of environmental programs.

The larger proportion of environmental spending has also been evidenced to support national development (Krajewski, 2016). Based on the explanation, we formulate the following hypothesis:
H1. Government environmental spending positively affects environmental quality

Human development and environmental quality

Human being also inseparable from the environment. The people who lived in a certain area interact directly with the environment. Thus, the characteristics of the people is an important factor for environmental quality. Good environmental quality can be accomplished together with people with good quality (Dhahir, 2020). People with better environmental awareness will have better behavior towards the environment and thus support the sustainability of the environment for today and future generations (Brotosusilo & Handayani, 2020). On the other hand, people with lower environmental awareness do not understand the importance of preserving the environment. Their behavior will be more likely to bring environmental damage and degradation (Zulham, et al., 2021) and thus threatens the sustainability of the environment. The people characteristic is represented by the human development quality that is measured comprehensively considering the economic, education, social, and other factors. Higher human development is expected to indicate good people with good behavior towards the environment. Therefore, human development is expected to have positive effect on environmental quality. In addition, previous study by Oktaviliana, et al. (2016) also demonstrates positive association between human development quality and environmental quality. Based on the explanation, we propose the following hypothesis:
H2. Human development positively affects environmental quality

Regional economy and environmental quality

The economy is also inseparable from the environment. Economy basically becomes the foundation of people's living to survive. Economy also gives the biggest support for people's welfare (Oktaviliana, et al., 2016). However, economic factors have been regarded to have negative consequences for environmental quality (Azwardi, et al. 2022), especially when the environmental capacity aspects are ignored to blindly boost the economic activities to gain profit. High level of economic activities will create larger amount of waste and emission that damage the environment. Subsequently, the growth of economy will also multiply the amount of waste and emission generated from business operation (Fitriyah, 2019). Higher economic growth should take

the environmental capacity into account, not just merely exploit the environment. To be more specific, environmental threat in the form of massive waste is more likely to happen from intensive industrial activities. Therefore, the intensity of industrial activities may bring higher environmental risks that results in lower environmental quality (Apresian, 2016). The arguments above are supported by previous studies. Farabi & Abdullah (2020) find that economic activity has significant impact on environmental degradation. Based on the explanation above, the hypotheses regarding the regional economy factors are formulated as follows.

H3a. Economic activity negatively affects environmental quality

H3b. Economic growth negatively affects environmental quality

H3c. Industrial activity negatively affects environmental quality

Methodology

Research Scope and Data

The scope of this study is Indonesian provincial regions. The population of our study is all Indonesian provinces with total of 34 provinces during 2015-2020 period. We employ all of the population as the research objects with total number of 2014 observations, expecting to cover all of the Indonesian regions. As for the research data, we use secondary data obtained from the BPS publication in the BPS website. Due to having observations from several provinces and six years of period, the nature of the data in this study is a balanced panel data.

Variables and Measurement

The dependent variable of this study is environmental quality. This variable is proxied by environmental quality index from BPS publication that assess the quality of the environment from many aspects from biotic and abiotic dimensions. The first independent variable is government environmental spending that is measured with the proportion of province government spending allocated for environmental functions. The second independent variable is regional human development measured by the regional human development index that represent the quality of human development from economic, education, social, and other aspects. Finally, the last independent variables are regional economy factors consisting of economic activity, economic growth, and industrial intensity. The student also use a control variable that is regional population.

All of the data are obtained from BPS publication available in the website. The details of variable measurement are presented as follows:

Table 1. Variable Measurement Summary

Variable	Notation	Measurement
Dependent		
Environmental quality	ENV_Q	Environmental quality index published by BPS
Independent		
Environmental spending	ENV_SPEND	Proportion of province government spending allocated for environmental functions
Human development	HDI	Province human development index
Regional economy:		
Economic activity	GDRP	Natural logarithm of Gross Domestic Regional Product (GDRP)
Economic growth	ECO_GROWTH	The percentage of GDRP growth compared to previous year
Industrial intensity	INDUSTRY	Natural logarithm of total labour in industry sector in a province
Control		
Regional population	REG_POP	Natural logarithm of total population in a province

Data Analysis

Our analysis is started with descriptive statistics analysis to help understand the research data better for all variables. We also analyze the distribution of digital banking offered by Indonesian commercial banks to illustrates the mapping of digital products offered. Then, we conduct correlation analysis to understand the correlation and relationship tendency among our research variables. Finally, the main analysis of this study uses multiple regression analysis to test the hypothesis. The analysis with multiple regression analysis is performed with the following regression models:

$$ENV_Q_{it} = a + \beta 1ENV_SPEND_{it} + \beta 2HDI_{it} + \beta 3GDRP_{it} + \beta 4ECO_GROWTH_{it} + \beta 5INDUSTRY_{it} + \beta 6REG_POP_{it} + e \dots\dots\dots (1)$$

Information:

- ENV_Q : Environmental quality
- ENV_SPEND : Environmental spending
- HDI : Human development
- GDRP : Economic activity
- ECO_GROWTH : Economic growth
- INDUSTRY : Industrial intensity
- REG_POP : Regional population

Results and Discussion

Summary of Research Data

Summarizing the research data through descriptive statistics is important to obtain important points such as the distribution, mean, standard deviation, minimum and maximum value of research variables as well as the trend of data development. The result of descriptive statistics analysis is presented as follows:

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
IKL	204	67.663	9.323	35.78	85.69
ENV EXP PROP	204	0.814	1.201	0.03	0.492
LN PDRB BERLAKU	204	32.943	1.15	30.913	35.574
ECO GROWTH	204	4.231	3.823	-15.74	21.76
HDI	204	69.993	4.093	57.25	80.76
IDUSTRY LABOR	204	502738.07	1001959.1	10357	4349675
LN POP	204	15.269	1.016	13.376	17.719

Further, we also provided the correlation analysis of our variables using pearson correlation. The result is presented in Table 3 as follows:

Table 3. Variables' Correlation

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) IKL	1.000						
(2) ENV_SPEND	0.275	1.000					
(3) GDRP	-0.596	0.076	1.000				
(4) ECO_GROWTH	-0.064	-0.099	-0.129	1.000			
(5) HDI	0.530	0.353	0.459	-0.143	1.000		
(6) IDUSTRY_LABOR	-0.436	-0.052	0.667	-0.030	0.147	1.000	
(7) REG_POP	-0.597	-0.037	0.875	-0.057	0.255	0.783	1.000

Hypothesis Testing: Panel Data Regression Analysis

We use panel data regression analysis to test our research hypothesis. The best estimation is using fixed effect model. The analysis results, as reported in Table 4, demonstrate that most of the independent variables have significant effect on government environmental spending, human development quality, and regional economy factor that are economic activity and economic growth.

Table 4. Hypothesis Testing Result with Panel Data Regression Analysis

Dependent: ENV_Q	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENV_SPEND	1.141	0.386	2.96	0.004	0.379	1.902	***
HDI	2.703	1.344	2.01	0.046	0.049	5.358	**
GDRP	-15.451	7.959	-1.94	0.054	-31.167	0.265	*
ECO_GROWTH	-0.179	0.106	-1.69	0.092	-0.388	0.03	*
INDUSTRY	0.001	0.001	-0.44	0.664	0.001	0.001	
REG_POP	-10.815	34.455	-0.31	0.754	-78.848	57.219	
Constant	553.498	487.066	1.14	0.257	-408.231	1515.227	
Mean dependent var		67.663	SD dependent var			9.323	
R-squared		0.135	Number of obs			204	
F-test		4.254	Prob > F			0.000	
Akaike crit. (AIC)		1141.005	Bayesian crit. (BIC)			1164.232	

*** $p < 0.01$, ** $p < 0.005$, * $p < 0.1$

Firstly, government environmental spending has positive effect on environmental quality that accepts hypothesis 1. The larger the allocation of government spending budget allocated to environmental function, the better the environmental quality in a province (Azwardi, et al., 2022). Based on this finding, it can be concluded that the regional government hold significant role in preserving the quality of the environment in their respective region. Indeed, the law in Indonesia also mandated the environmental function to regional government so that the contribution is indispensable. The environmental function mandated to the regional government is important to protect the environment from environmental threat so that significant environmental damages can be prevented. In practice, larger allocation of spending will support and facilitate various activities conducted by the regional government in implementing the government function (Saragih, 2022), including the environmental function. Besides the spending, regional government should also implement good environmental protection programs that are relevant to the circumstances in the respective region. Also, local government should have proper regulations concerning the environmental matters at regional level to achieve healthy environment development (Absori, et al., 2020). Therefore, the related parties such as the people in general, business companies, and other related parties will not do any damage to the environment or even contribute significantly to environmental protection together with the government.

Human development also positively affects on environmental quality that is in line with hypothesis 2. Regions with better human development quality tend to have better environmental quality in Indonesia. The finding posits that the people as the ones that interact directly with the environment must participate in the environmental protection. This result further bring implication

that the government and NGOs must continuously attempt to build good understanding, intention, and initiatives in preserving the environment (Sumargo & Haida, 2020). It has a great urgency and must be one of the priorities because in fact the environmental awareness of Indonesian people still becomes an important issue that needs to be improved. There are still a lot of irresponsible acts committed by the people that damage the environment (Dhahir, 2020), such as massive littering, poor waste management, and the use of less environmentally friendly products. With good people attitude towards the environment, the government and the people can synergically realize sustainability (Brotosusilo & Handayani, 2020).

Regional economy factors specifically the economic activity and growth have negative effect on environmental quality that is in line with hypothesis 3a and 3b. Regions with higher level of economic activity tend to have lower environmental quality, confirming Farabi & Abdullah (2020). This proves that the economic activity has not been counterbalanced with the environmental protection efforts by the responsible parties such as the companies, the people, as well as the government. The negative effect of economic growth also indicates that the economic growth is not yet followed by the growth of environmental protection efforts by these related parties (Fitriah, 2019). Indeed, a large number of companies that intensify regional economic activities in Indonesia still do not implement proper operations in which the operation still bring damage to the environment. The people that runs the economic activities are also still relatively less careful about the environmental damage that results from their activities. In addition, the government may also have relatively weak law enforcement in implementing the environmental regulations.

Meanwhile, the industrial intensity as one of the regional economy factor demonstrate insignificant effect on environmental quality in which the result rejects hypothesis 3c. This insignificant result may be due to the differering characteristics of industrial profile that applies in specific regions. Further, the study is equipped with additional test in order to examine the effect of the independent variables on air quality with the following results:

Table 5. Hypothesis Testing Result with Panel Data Regression Analysis

Dependent: AIR Q	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ENV_SPEND	0.636	0.357	1.78	0.077	-0.069	1.341	*
HDI	0.286	1.227	0.23	0.816	-2.136	2.708	
GDRP	-1.718	7.39	-0.23	0.081	-16.31	12.873	*

Dependent: AIR Q	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
ECO_GROWTH	0.146	0.099	1.47	0.143	-0.05	.341	
INDUSTRY	-1.424	2.172	-0.66	0.513	-5.713	2.864	
REG_POP	71.26	31.345	2.27	0.024	9.366	133.155	**
Constant	-958.35	449.125	-2.13	0.034	-1845.204	-71.496	**
Mean dependent var		86.602	SD dependent var			7.187	
R-squared		0.158	Number of obs			204	
F-test		4.361	Prob > F			0.000	
Akaike crit. (AIC)		1110.600	Bayesian crit. (BIC)			1137.145	

*** $p < 0.01$, ** $p < 0.005$, * $p < 0.1$

The result of the additional test revealed that among the independent variables in this study, only the government environmental spending that has significant positive effect on environmental quality at regional level. This positive effect emphasize the importance of government efforts at regional level in preserving the environment. Meanwhile, the economic activity also exhibit negative effect on air quality in Indonesian provinces. The finding also strengthen the fact that the economic activities in Indonesia is not yet followed with proper environmental protection efforts to mitigate the risk and threat of environmental damage that result from economic activities. In this additional test, the other independent variables exhibit insignificant effect.

Conclusion

In conclusion, the study reveals that the environmental quality in Indonesia during 2015-2020 is good enough with slight fluctuation in terms of the trend. Panel data regression analysis demonstrate that greater government environmental spending and higher regional human development support the better environmental quality. Meanwhile, economic activity and growth exhibit negative effect on environmental quality. The study provides implications for the related parties in Indonesia specifically in environmental protection efforts. The government should have proper allocation for environmental spending in accordance with the environmental threat and circumstances faced by the regions. The people should also participate in environmental protection that requires support and education from government agencies and NGOs. Finally, the level of economic activity must be counterbalanced with the environmental protection that is important to mitigate the environmental damages that result from economic activities.

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Financial accountability of wayang kulit performances in Surakarta-Yogyakarta, Indonesia.

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Abstract

This study aims to reveal the form of financial accountability in the Surakarta-Yogyakarta Indonesian wayang kulit performances. The time span of this research starts from January 2020 to June 2022 (2.5 years). Ethnography is the method used, where the researcher interacts with the object of research (dalang, sinden, wiyaga) in daily life during the research period to find forms of accountability. The research involved dozens of puppeteers, dozens of wiyaga and dozens of sinden. The results show that the financial accountability of wayang performances is in a non-written form where the responsibility is carried out by the puppeteer, prioritizing the operational financing of wayang performances, followed by the provision of honoraria to wiyaga, sinden and crew. Players of several types of musical instruments with special skills get higher rates including the Rebab, Kendang, Gender and Sinden (RKGS). With regard to income tax that has been deducted by the respondent, the puppeteer, wiyaga or sinden, there has never been a receipt of proof of deposit to the state treasury for the tax that has been collected.

Keywords : Accountability, Finance, Performances, Puppets.

Background of the problem

Indonesia, especially Surakarta-Yogyakarta, is the center of world shadow puppet culture (Widjajadi, 2022) . Of course, there are many other regions and types of wayang in the world, such as the Sundanese puppet show and the Indonesian Balinese wayang. However, wayang kulit still has thousands of fans during performances with a show contract value of up to hundreds of millions of rupiah. Many famous puppeteers come from Greater Surakarta, including Ki Narto Sabdo, Ki Anom Suroto, Ki Manteb Sudarsono, Ki Warseno Slenk, and other puppeteers (Okayzone, 2021) .

Surakarta is one of the cities in Central Java which is known as a city of culture. The tourism potential in this city is quite large with various leading tourist destinations in the form of history to culture. One of the famous cultures in Surakarta is wayang kulit. The dalang is the person who plays the puppets and is the main character who organizes the performance. The Surakarta wayang kulit performance as a form of cultural expression has reached the peak of aesthetics because there are several branches of art such as literature, music, painting, roles and so on. Wayang kulit performances also contain messages of the noble values of life, humanity , and the universe through stories about the Mahabharata and the Ramayana. In today's modern times, such a work of art is required and created as a commodity subject to the laws of market supply and demand. This situation is an explanation because the puppeteers have the right to live, besides that they need to develop positive artistic insights (Soetarno, 2011).

The reality of the current wayang kulit performances has not yet fully touched the accountable aspect, where accountability itself is a form of responsibility for the puppeteer. This phenomenon was obtained by researchers in the initial observations that have been made, including in the observations of researchers regarding the wage system (financial aspect) of the mastermind Ki Prabu there is no standardization of wages received from responders to pengrawit. An example of a puppet show on 12 August 2020 in Ngarum village, Sragen district, Tanon village on 15 October 2021, Sragen district, the salary is not the same even though in the same area of Sragen Regency. The same thing happened to Ki Karyo who had the same standard in Puhpelem village. May 3, 2021, Wonogiri district (interview source for the dalang Ki Prabu, Ki Karyo, Ki Supa (all three are pseudonyms), on June 18, 2021 at 10.25).

In principle, there is no official and written agreement between the dalang and his team for the performance of all the puppeteers. In fact, the mastermind already has a policy regarding the wage standard. The wage standard has not been written legally. The mastermind in compiling wage standards has taken into account the income earned as the basis for the provisions on musicians' wages. However, in general, the other puppeteers already have standardization. Starting from the initial observations, the interviewees argued that any responses received with a certain nominal value from the respondents were not informed to the supporters of the wayang performance.

Preliminary interviews on the financial accountability of wayang kulit performances were conducted with two well-known puppeteers, Ki Manteb Sudarsono and Ki Warseno Slenk. The results of the interview confirmed that in one wayang kulit performance, the contract value ranges from tens of millions to hundreds of millions of rupiah. Differences in the range of contracts for wayang kulit performances can be influenced by several things, one

of which is the level of popularity of a puppeteer. However, the amount of contract value held by a puppeteer. Until the preliminary interview was conducted, no form of financial accountability for the wayang kulit performance had been found (Interview, 2021).

Based on the explanation above, the focus of this research is arranged with a question sentence; "What is the form of financial accountability for wayang kulit performances in Surakarta-Yogyakarta? " In connection with the focus of this research, the purpose of this study is to reveal the form of financial accountability in the Surakarta wayang kulit performance. The implication of the purpose of this research is that the puppeteers and *stakeholders* of wayang kulit can make a general reference for financial accountability.

Based on the explanation above, the specific objective of this research is to investigate in depth the Financial Accountability of Puppet Performances. Financial Accountability based on local wisdom through observing cultural and spiritual studies which is one way to include accountability. Cultural and spiritual studies are a major urgency that must be carried out to retrace the values that will become the fundamental basis of accountability. Puppet Performance Financial Accountability which is realized with cultural values is very important to be observed.

Another urgency is to increase the knowledge base and study of accounting and *governance* regarding financial accountability based on local wisdom. In addition, the ability of artists to cultivate identity and also manage a performance that adapts to the times and the management of the performance budget is very important so that it must be given a sufficient portion to improve a good shadow puppet performance which in turn will increase financial accountability and performance of the work of art. .

Literature Review

Previous research on accountability has been published by several researchers. Yulisa, Ratnawati and Taufik (2019) that accountability is influenced by internal control factors, information systems and humans which is carried out with a quantitative model. Warsina, Suhardjanto, Rahmawati and Probohudono (2021) specifically examined the impact of economic, social, and cultural development on society with a quantitative model . Future research on financial accountability of wayang kulit performances with a qualitative research model. Outcomes of this research are planned in the form of scientific publications of international repute in the journal *Theory, Culture and Society* .

Accountability is a control mechanism using material measures, ethical and moral dimensions (Doberstein, 2013). It can be defined according to the context and conditions, that accountability requires a relationship in which a person is asked to explain and take responsibility for their actions (Sinclair, 1995). Accountability is also an obligation of the holder of the trust to explain and inform the achievement of the mission and goals of the organization that has been planned through the media of accountability on a regular basis (Ferry, Eckersley, & Zakaria, 2015).

Public accountability has three main functions, namely: (1) To provide democratic control (the role of democracy), by building a system that involves a wider range of *stakeholders* and *users* (including the community, the private sector, the legislature, the judiciary and within the government itself both at the level of ministries, institutions and regions). (2) To prevent corruption and abuse of power (constitutional role). (3) To increase efficiency and effectiveness (Bovens, 2007). The principle of public accountability is to ensure that every implementation activity can be accounted for openly by *stakeholders* to parties affected by the implementation of policies. (Guidelines for Strengthening Security for Regional Development Programs of Bappenas and Ministry of Home Affairs, 2002).

Important aspects of accountability need to be identified, especially those related to *stakeholder responsibilities*, information becomes part of the accountability needed to fulfill the duties and responsibilities of the *stakeholder role* (Unerman & O Dweyer, 2006). Accountability is the provision of information and disclosure *on* the activities and performance of the organization to interested parties (Schiavo-Campo & Tomasi, 1999). Implementation of accountability as an effort to maintain trust in the public (Kearns, 1996).

The financial accountability of wayang kulit performances with the dalang as the primary *stakeholder is the focus of this research*. The roles and responsibilities of the mastermind and the team as part of the *stakeholders* are in the premise of fulfilling financial accountability. This financial accountability includes financial management of wayang performances by the dalang and team so that they can organize some of the needs of responders and the government. The need in question is the financial management of wayang kulit performances by adjusting the responsibility of the puppeteer to the public.

Wayang ancestral cultural heritage can be viewed from two different perspectives, namely, literacy traditions (*literal*) are cultures that are recorded in books, for example, history books. and oral perspective (*oral*) is an information or discourse that is delivered orally and follows the pattern of community development . Oral tradition is all information that is conveyed unwritten, following ways or customs that have been patterned in a society which includes several aspects including ceremonial and ritual expressions. Likewise, the inheritance tradition that occurs in the grip of the puppeteer, the oral tradition is carried out through *oral speech* which is stored in the memory of the dalang which is passed down through direct channels, namely four eyes with the generations below him or indirectly, namely through the performances he performs. This kind of inheritance is still going on today. The story is conveyed orally and focuses on the elements of the *play* that are used as a reference. Stories are conveyed orally and described as genealogical, myths, legends, fairy tales, and various heroic stories (Sedyawati, 1996). Oral culture has a very broad scope, as in the wilderness, it still needs an intellectual touch to explore hidden sources or potentials and cultural facts which include (1) genealogical systems, (2) cosmology and cosmogony, (3) history, (4) philosophy. , ethics, morals, (5) system of knowledge (*local knowledge*), and (6) rules of language and literature (Sedyawati, 1996).

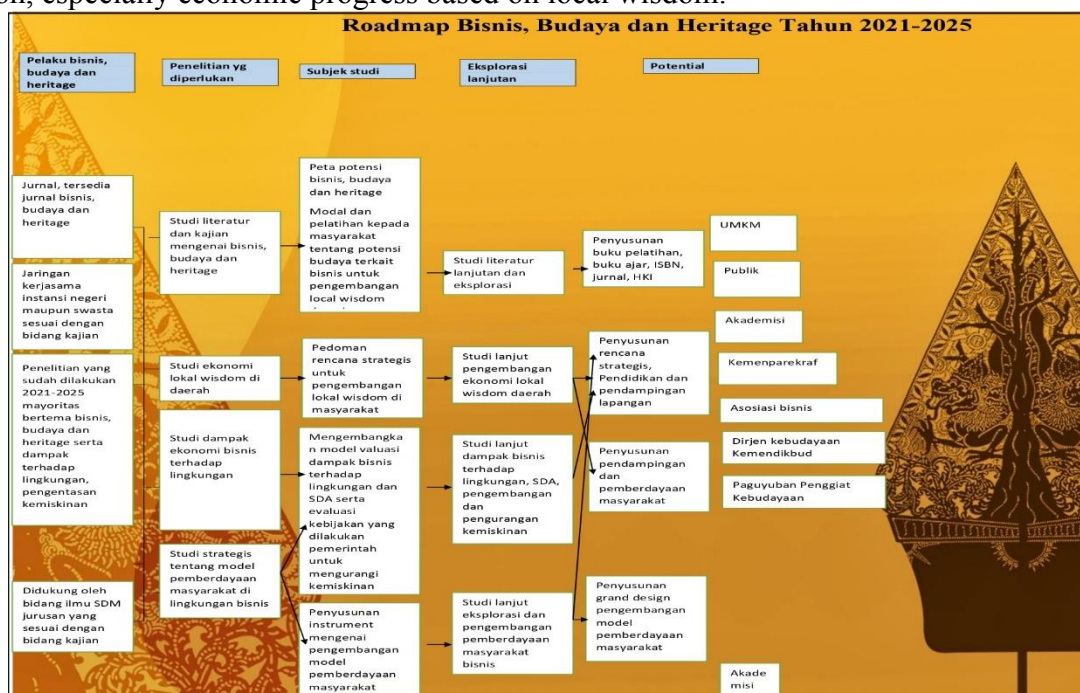
Indonesia is a *super power country* in the field of culture". Therefore, the country's priceless wealth should be able to become a driving force for development. One of the cultural treasures in question is that wayang kulit has been designated as a world heritage since November 7, 2003. Recognizing that the wayang kulit performance is a *Masterpiece of Oral and Intangible Heritage of Humanity* . This ancient art of storytelling or *oral tradition* originates from Indonesia. The inauguration of Indonesian wayang as a *cultural heritage* in wayang kulit performances does not only cover material aspects (including wayang and its equipment in physical form) but also includes performances, values and *kawruh* or local knowledge of the community contained in it (UNESCO, 2003). .

The first research related to accountability, Groenendael (1987) examined the Dalang behind the Wayang. The content of the study includes the position of the dalang as the main actor in wayang performances and a respectable social position in society. He also reviewed a bit about the dalang education system in a society. Second, reviewing the ethical values in wayang. The ethical values of the puppeteers and the requirements for a puppeteer, but a puppeteer of the past and not a puppeteer now, Third, Waluyo (1994) who researched "The Role of the Dalang in Delivering Development Messages", talked a lot about the way the puppeteers convey messages from government programs through Punakawan figures.

The wayang kulit performance is in accordance with the concept of *The Types of Legitimate Domination* . The concept coined by Weber (1968) analyzes three bases of legitimacy, namely, rational, traditional, and charismatic. The basis of rational legitimacy is

related to an agreed set of legal rules that refer to traditional beliefs. While the traditional basis since ancient times, wayang performances have been favored by the Javanese community as a traditional rite of passage and those who organize it are the palace (king). This describes the ideal relationship between the king and his people as well as providing entertainment for the wider community, considering that the masses in Java are very thick with traditional arts, meaning that when there is a wayang kulit performance, the masses gather in that place.

Wayang kulit performances are used as a means of measuring villages, celebrating people's wishes and for certain events. The final basis of legitimacy, charismatic, has to do with chastity, heroism, or other qualities that cause the dalang to be the crowned leader; such as prophets and religious leaders in this case the scholars. Weber's work is associated with financial accountability, which used to be a wayang performance which was transformed into a spiritual one and has now shifted to a commercial one. Wayang kulit performances as local wisdom actually have potential as a medium for community change in a more advanced direction, especially economic progress based on local wisdom.



The following is a roadmap for the Financial Accountability research for the Solo Raya Wayang performance. The first thing to focus on is hacking (investigating in depth and holistically) financial accountability in wayang performances. After successfully investigating in depth and holistically, namely implementing to integrate social, economic and administrative infrastructure. This research involves business people, humanists, the Surakarta Youth Dalang Community (Darmasuta), the Dalang Aji Tirta Wening Community, BPIP and the Ministry of Tourism and Creative Economy, and heritage

Research methods

This research is an exploratory research using post positives using ethnographic methods. To reveal the facts on the object of research, the researchers interacted directly with the dalang, wiyaga (musicians), sinden (singers) and other technical teams in wayang kulit performances. Interaction is carried out in the form of interacting in the life of the puppeteer inside and outside the performance. In addition to feeling or observing directly, the researchers also conducted in-depth interviews with the dalang, wiyogo, and sinden. A

comprehensive understanding of the research theme is also carried out by conducting a workshop (*natural focus group discussion*).

Seeing the implied meaning of the title and the problems studied, this research is a type of qualitative research, why choose a qualitative method to understand the phenomena experienced by the subject. The ethnomethodology approach is trying to understand the meaning of an event and its interrelated influence with humans in certain situations (Creswell, 1994). An ethnomethodological approach is used to answer research questions about financial accountability of wayang kulit puppeteers. In line with the opinion of Hashemnezhad (2015), this research is more flexible because in this study it allows or allows extraordinary spontaneity and adaptation of interactions between researchers and informants.

In this study, preliminary observations were made by visiting the house where the informant was domiciled, well received and very open, meeting with the informant (Dalang), talking while sitting relaxed about various ideas about the finances of the performance, the spiritual mastermind, the responsibility of the dalang, about the development of wayang performances from the past to the present day, including accompanists (pengrawit) and even wayang spectators. Not only that about the development of wayang *plays* (story), *sanggit plays* , even the process of becoming a puppeteer artist. The researcher also met with his wife, children, and grandchildren to get input on the activities of the informants.

The research subjects are determined based on the considerations of the parties who get the information and data that will be needed in this research. The key informants (primary) in this study include Ki Blasius Subono and Ki Purba Asmoro, as well as puppeteers throughout Solo Raya. Added additional (secondary) informants to strengthen the study on the accountability of the mastermind.

Data analysis used ethnomethodological analysis. Previously stated regarding the research instrument using Coulon's ethnomethodology (2008), revealed that there are several ways that can be used and are considered the most suitable by researchers in analyzing ethnomethodological data, namely the following stages of analysis:

1. The first stage of Indexicality Analysis

Researchers create an index or theme through expressions and body language. Furthermore, by going through a participatory observation process with informants and then transcribing the data for indexing, from the data obtained based on the points starting from plus and added with the results of interviews.

2. The second stage of Accountability Analysis

The researcher observes and finds expressions regarding accountability, the subject has the authority to convey about responsibility (*responsibility*) or the obligation of the subject expressed in terms of money values, units of wealth, or other predetermined basis.

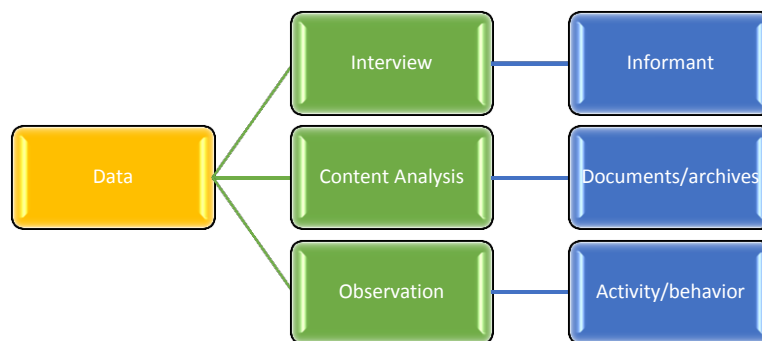
3. The third stage of Reflectivity Analysis

Describing practice is also a social framework with an equivalent between describing and producing an interaction that can mean understanding and expressing understanding, requires something that can be observed at the same time. After the researcher observes and finds the expression of indexicality, it must be able to examine the reflexivity of the expression.

4. Data Triangulation

The technique of checking the validity of the data is by using triangulation of sources and methods. Triangulation of sources compares and rechecks the degree of trustworthiness of information obtained through different times and tools in qualitative research. In addition, this study uses triangulation by checking the degree of confidence in the findings of research results from several data collection techniques (Patton, 1987).

In this case the researcher has conducted research by meeting directly with several informants and conducting in-depth interviews (*depth interviews*) with several informants including 1. to the Regent of Pati Haryanto, SH., MM (government)). 2. to Sriyadi SE (writer), 3. To Pardiyaka (audience). 4. Madiyono (pengrawit). Next, dig up various information from several informants who are considered important to be used as data sources.



The following is an image of a research flow diagram that describes the activities that have been and will be carried out during the proposed time. The following flow chart provides an overview of the clear stages from the beginning of the process, the outputs, and the targeted achievement indicators, as well as a description of the duties of each research member.

Results and discussion

The financial accountability of wayang performances is also aimed at the internal performance of the performance crew by a puppeteer. Form accountability in the form of distribution of honorarium responses by a puppeteer to wiyaga, sinden and support crews. To understand the form of financial accountability of wayang kulit performances, the researchers conducted intense observations on the lives of the puppeteers who were followed up with in-depth interviews. The following is an in-depth interview with several puppeteers about the distribution of wages in response to wayang performances.

Interview with Ki Warseno Slenk

Based on the results of the mecalam interview, the form of financial accountability for wayang performances by the dalang is aimed at wiyaga, sinden and crew in the form of distribution by prioritizing what needs to be prioritized with the motto "*sing important podo mlakune*". The jargon implies that the response wages must be used to finance non-wage trading operations . Furthermore, if the non-wage performance wage has been met, the costs that must be met are the wages of wiyaga, sinden and crew with the principle of fairness ora kudu podo, where "*gaming*" musical instruments with special skills (Fiddle, Kendang, Gender) and sinden are given more awards by higher wages.

However, the wages for wayang kulit performances are also differentiated according to the fame and class of the puppeteer. Class 1 puppeteers are well-known puppeteers, with quality 1 with performance rates of up to hundreds of millions of rupiah. Class 2 dalang is a puppeteer who crawls for fame with a performance rate of 30-40 million rupiah. Class 3 puppeteers are the initial puppeteers who still have to struggle with an average tariff of 15 million rupiah for each performance. The table below is a summary of interviews with the three types of dalang that have been confirmed to wiyaga and sinden.

Budget Estimate	Dalang Class				Percentage
	CLAS S 1	GRAD E 2	GRAD E 3	average	
	Million Rp	Million Rp	Million Rp	Million Rp	
Average response score	100	40	15	51.67	100%
Final Income Tax	6	2.4	0.9		
Response value after deducting tax	94	37.6	14.1		
Non-wage operating costs					
average sound system cost	10	5	2	5.67	10.97%
Wayang and Gamelan transportation costs	7.5	1.5	1.5	3.50	6.77%
Wiyaga, sinden and Kru transportation costs	10	2	2	4.67	9.03%
Total non-wage operating costs	27.5	8.5	5.5	13.83	26.77%
Non-wage operational income	66.5	29.1	8.6		
Cost					
Wiyogo: fiddle maker / R	1	0.5	0.25	0.58	1.13%
Wiyaga: drummer / K	1	0.5	0.25	0.58	1.13%
Wayaga: gender maker / G	1	0.5	0.25	0.58	1.13%
Sinden / S	8	2.5	0.75	3.75	7.26%
Average number of sinden					
Wiyogo non RKGS	13.5	3.75	1.5	6.25	12.10%
Non Wiyaga Crew	0.75	0.15	0.15	0.35	0.68%
Operational costs of wiyaga, sinden and crew wages	25.25	7.9	3.15	12.10	23.42%
The value of the response of the Dalang	41.25	21.2	5.45		

Note: The puppeteer still has to bear the cost of depreciating the gamelan and wayang

Source: Processed from the results of Focus Group Discussion

Conclusions, Suggestions and Implications

The end of this study concludes that the source of funding for wayang kulit performances comes from government and non-government (community) funds . The difference between the two sources of funding has an impact on the tax obligations that must be borne by the dalang and wiyaga and sinden. In terms of funding sourced from government funds , the respondent will deduct the fee for activities as income tax that must be paid by the dalang, wiyaga and sinden. However, the dalang, wiyaga and sinden never received proof of deposit to the state treasury for the withheld tax. On the other hand, the tax deduction is not carried out if the funding comes from non-government (public) funds .

The second conclusion shows that the form of financial accountability of the dalang is carried out by the dalang and is shown to the wiyaga, sinden and other crews for the fee received for the response. When a puppeteer receives a response fee, the honorarium is

prioritized to finance all performance operations that are the responsibility of the puppeteer. After the operational costs are paid, the main priority for the puppeteer is to give honoraria to the wiyaga, sinden and support crew. As a result of mutual awareness and agreement, some wiyaga with special skills and students received higher honors (up to 200%) than wiyaga in general. Wiyaga with special skills and sinden, known as RKGS refers to the musical instruments and activities carried out, namely Rebab, Kendang, Gender and Sinden. The mastermind as the top person in charge of the activity will receive an honorarium if all operational costs and the salaries of all crews, especially wiyaga and sinden have been paid.

This study has several limitations that need to be improved in future research. Some of the limitations of this study include that this study only focuses on wayang kulit performances in Surakarta-Yogyakarta. Other forms of financial accountability of wayang (wayang orang, wayang golek) are not the focus of this research. Likewise, the implementation of wayang in other places (Malaysia, Philippines, Thailand, Sunda-Indonesia, Bali-Indonesia) is also not the focus of this research. However, the form of financial accountability of wayang performances with different forms and places can refer to the form of Surakarta-Yogyakarta shadow puppet performances.

The implications of this conclusion include, the government can formulate regulations that direct the responder to provide proof of deposit for the taxes that have been collected to the dalang, wiyaga, sinden and all supporting crews. This is to protect and ensure that the mastermind and crew have fulfilled their tax obligations. Another implication is that this form of financial accountability for wayang kulit performances can be used as a model for financial accountability for other forms of puppets or other forms of art in different places and times in Indonesia, Malaysia, the Philippines, Thailand and other world countries.

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**GAP POSITIONING AND REPOSITIONING ROLE IN EMBEDDING
SUSTAINABILITY:
REFLECTION BY EDUCATOR ACCOUNTANTS**

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ABSTRACT

Purpose — *The purpose of this study is to show whether there is a gap in the role of accountants when viewed from the capacity they have, the expectations of the role they face, the perception of their ability to meet expectations based on the capacity they have, as well as the role performance they have played in efforts to embed sustainability. This study also aims to determine the intention of educator accountants to reposition their role in embedding sustainability.*

Design/methodology/approach — *This study uses gap analysis by adopting the Importance-Performance Analysis (IPA) method to measure how they assess the capacity they have, the role expectations they face, the perception of their ability to meet expectations based on their capacity, as well as the role performance they have performed in sustainability embedding efforts. The results of the gap analysis are then used as information for reflection through the dialogue method with the participants. At this stage, thematic analysis is then used on the qualitative information obtained.*

Findings — *The role of the educator accountant is still in under action, where awareness of capacity and role expectations is high, but the perception of the role and performance shown is still low. The gap between expectations and the realization of role performance, as well as between capacity and perception, indicates a positioning gap.*

Practical implications — *The results of this study imply that educator accountants are actually in the right position to play more roles in pursuing sustainable development goals. This consciousness must begin to be realized in every implementation of the Tridharma of Higher Education.*

Originality/value — *The gap between expectations and role performance, as well as between capacity and perception, indicates a positioning gap on the role of accountant in embedding sustainability. Consciousness to do repositioning can be seen as the beginning way to improving the role of accountants to be more actively involved in embedding sustainability.*

Keywords — *Gap Positioning, Repositioning, Accountant Role, Embedding Sustainability*

Paper type — *Qualitative Research*

How to Create A Sustainable Village Credit Institution (Phenomenological Research)

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Abstract

The existence of the Village Credit Institution (VCI) in the traditional village environment is always expected to have a positive effect on the community. However, in practice various obstacles have colored the VCI's journey, especially with the pandemic conditions that hit Bali greatly affecting the development of the VCI. Problems experienced such as the non-operation of the VCI inadequate financial performance, difficulties in dealing with non-performing loans, negligent persons and violated their authority and various other problems. This study aims to design how to create VCI sustainability in Bali. Primary and secondary data were obtained by means of in-depth interviews. This research is a qualitative research, interpretive paradigm using a phenomenological approach. The population of this research are interested parties in the VCI where to ensure the depth of the information obtained, 4 research informants will be selected consisting of VCI supervisors, VCI managers, VCI members and legal practitioners.

Keywords: sustainability, village credit institutions, interpretive, phenomenology

Introduction

The role of the VCI in advancing in its work environment is in doubt. VCI as a financial institution located in a certain traditional village environment is always expected to have a positive effect on the community, especially in the economic sector (Adnyani, 2017; Sriarti, 2020). The establishment of the VCI began with the aim of improving the living standards of the community in the village and eradicating bondage, illegal pawning, increasing people's purchasing power and facilitating payment and exchange traffic in the village (Wirasmini Sidemen, 2013).

In practice, various obstacles have colored the VCI's journey, including especially with the pandemic conditions that hit Bali which of course greatly affected the development of the VCI. These problems include VCIs that do not operate, inadequate financial performance, difficulties in dealing with non-performing loans, individuals who are negligent and violate their authority so that they are caught in legal cases, administrators and managers who do not comply with existing regulations, supervision of daily activities. Some traditional villages that do not have *perarem* (regulations) on VCI so that the solution to VCI problems has not been contained in *perarem* (BPKP Bali, 2022). Other phenomena related to this can also be observed in several news media regarding the cases that befell the VCI management, including the Serangan VCI and Sangeh VCI (Bali Post, n.d.; Koagouw, 2022). Several other VCIs spread across Bali also experienced similar problems which were exposed by the mass media.

The latest condition of VCIs in Bali which was conveyed by the expert staff of LPLPD Bali who was delivered in a workshop held by BPKP representatives of Bali that in the period of June 2022 out of 1437 VCIs formed that operated only 1,336 units or operating around 93.0%, 7% were not operates with a workforce of 8,285 people. The largest percentage is 42.1% of VCI wealth in the medium category, namely Rp. 1 Billion until smaller than Rp.10 Billion as many as 562 VCI units while only 3.6% or as many as 48 VCI units which are in the very large category. The total

wealth of the VCI is Rp.23,560.5 billion, which shows that the VCI has a major role in contributing to the welfare of the community so that the VCI with various kinds of problems must receive serious handling from all parties. Based on the above background, the formulation of the research problem is "How to create a sustainable Village Credit Institution?".

A company requires a governance in carrying out its operational activities. Corporate governance is a set of mechanisms, processes, and relationships by which the company will be controlled and operated (Ghozali, 2020). Uncertainty situations require good corporate governance, which is a system consisting of functions related to carrying out the company's operations as an economic and social entity through the application of generally accepted principles. GCG cannot be separated from agency theory which was popularized by Jensen and Meckling in analyzing the relationship that occurs between owners and agents (Hamdani, 2016). In this study of course LPD as an organization in which there are interested parties who will act as agents and principals.

VCI also has agency problems where due to the separation between the management and owners of the VCI, namely members of the local indigenous community. The remaining operating results cause the VCI management to take action to increase its business volume to obtain financial compensation which can have serious consequences if it is not accompanied by the ability to detect and manage risks properly. Furthermore, the information is not symmetrical due to the ownership of a lot of information by the management because the management has a lot of information and assumes that other people do not know and do not understand what they are doing (adverse selection). This will result in moral hazard and behavior that is concerned with individual interests and at the expense of other people and institutions (Suartana, 2009).

The General Guidelines for Good Corporate Governance in Indonesia issued by the National Committee on Governance Policy (KNKG) in 2006 regulates good corporate governance in Indonesia. In order to achieve the goal of realizing good corporate governance, it will require the cooperation of various parties involved, including policy makers, business actors and the community. In accordance with this, the principles of corporate governance are divided into a) transparency, b) accountability c) responsibility, d) independence and e) fairness and equality. VCI is one of the microfinance institutions in Bali that has its own uniqueness compared to other microfinance institutions (Saputra et al., 2019). As an institution in which various interested parties are gathered, a process is needed. Governance within the VCI relating to the procedures used by stakeholder representatives in the organization, providing oversight and control that is governed by management. Governance activities are a form of accountability to stakeholders (Suartana, 2009). The parties related to governance practices in the VCI involve the village head, internal supervisor, the head of the VCI, the administration section and also the cashier. Several previous studies that examined VCI governance include Adnyani, 2017; Augustini, 2019; Anggreni & Suartini, 2018; Hadiati et al., 2021; Sari & Mahuni, 2020; Sriarti, 2020 and in this study, when compared with previous research, we examine in more depth through in-depth interviews with expert informants from the economic, legal and culture.

Research methods

This research was conducted at Cengkilung VCI, one of the VCIs in Denpasar City, which has implemented good governance. Primary and secondary data were obtained by means of in-depth interviews. This research is a qualitative research, interpretive paradigm using a phenomenological approach. Interviews will be conducted with research informants, namely I Gusti Ngurah Putu

Sumardika (Chairman of VCI), I Wayan Ari Wardana (Supervisory Agency), I Wayan Suweca (VCI member) and a prosecutor, namely I Made Agus Mahendra Iswara, SH, MH. Researchers explore information about governance through formal and informal questions and answers combined with observations of phenomena in the field. According to Sanders (1982) the first thing the researcher did was to do an intentional analysis by combining the perceived object (*noema*) and subjective understanding (*noesis*) on the object of research through notes and reports, individuals who work in organizations, organizational activities, and perceptions members regarding VCI governance.

Discussion

This study seeks to reveal how to create a sustainable VCI in terms of its governance which stems from the various problems it experiences. Considering the problems that have reached the realm of law, in this study what distinguishes it from other research is that interviews with sources who are competent in legal matters other than VCI managers, members and supervisors can later be used as a foothold in solving some of the problems encountered.

Transparency

Transparency is the ease of providing material, relevant information in a way that is easily accessible and understood by stakeholders. In this regard, the VCI has implemented it, which can be seen from the excerpts of interviews with the VCI chairman.

"We have made financial reports and can be given to our members and supervisors because it is our obligation as managers to provide them."

This is in accordance with the research of Handayani et al.(2020); Sastra & Erawati (2017) which states that transparency has a positive effect on financial performance where good financial performance is one of the predictors that ensures the sustainability of the VCI.

Accountability

Accountability reflects that organizational arrangements are carried out correctly, measurably and take into account the interests of the organization that take into account the interests of village community members and other interested parties. The results of the interview show that the VCI Chair understands the vision, mission and objectives of the establishment of the VCI and is aware of his duties and responsibilities both in operational activities by always controlling employees. This can be seen from the excerpts of interviews that researchers did.

"Being the head of an LPD must be disciplined in controlling operational activities, especially in terms of how to document evidence of existing transactions carried out by employees according to existing rules so that they are not misused, because all of the responsibility are on the chairman of the VCI".

The same thing was conveyed by the VCI supervisor who is an accounting graduate who stated that inspections were often carried out without prior notification in order to provide a disciplinary effect in carrying out the duties of VCI managers. However, it is undeniable that at the beginning of serving as the VCI supervisory, there were a few obstacles when providing guidance to more senior employees whose education did not have an accounting background. After being approached and assisted by the VCI supervisor, the problem was finally resolved and the

practices in VCI financial administration were in accordance with applicable standards. This statement was also revealed from an excerpt from an interview conducted with one of the VCI members who also happened to be a former local customary village chief who stated that previously VCI had experienced difficulties in preparing financial reports due to a lack of understanding of accounting from VCI managers and supervisors so that further recruitment of managers and supervisors was carried out. whose background is in management and accounting science so that VCI operations and supervision can be carried out better which also affects VCI performance.

Responsibility

Responsibility is the implementation of responsibility by VCI managers to members, the community and the environment and must comply with applicable laws and regulations. In addition, responsibility is also reflected in the VCI's concern for the sustainability of community life and the environment as well as decision making in determining the direction and policies of the VCI. This was conveyed by the Head of the VCI that the VCI "*medana punia*" at Kahyangan Tiga Temple was Rp. 300,000 each *piodalan* (ceremonial day). In addition, if there are members who experience grief and need funds, members can borrow a maximum of Rp. 30 million for 36 months without collateral with an interest rate of 1.5% decreased. Of course, all VCI activities are carried out according to applicable regulations. With regard to changes in regulations that will be carried out, the VCI manager will submit first in the "*paruman adat*" before making decisions such as the proposal from members to lower the VCI interest rate as a result of the pandemic and even more so due to VCI competition with low interest KUR offers by the bank and this is also one way how in the future VCI will continue to exist in helping the welfare of indigenous peoples and their environment.

Independence

Independence is the management of financial statements carried out independently so that there is no domination and intervention from any party as well as in overcoming problems that exist at a certain level carried out independently up to 10 times the installments are in arrears, it will be discussed in the "*paruman adat*". Independence is also reflected in the development of the ability of the VCI Chair and staff with training from the BPD (Regional Development Bank) which is conducted once a year.

Fairness and Equality

Fairness and equality include the opportunity for VCI members to argue, management fairness to members as well as equal opportunities in recruiting employees from among indigenous peoples. Especially in the recruitment of employees considering the problems that have been experienced and have been previously conveyed specifically for the head of the VCI, it is prioritized for members of the indigenous village community with management or accounting backgrounds to be competent in carrying out their duties. Given the considerable challenges faced by the VCI in the future, it was also revealed the hope expressed by VCI members that an VCI chair must have innovation in carrying out VCI activities. The following are excerpts of interviews conducted with VCI members.

"Currently, the challenges of VCI are quite large and we as members have high hopes for our VCI so that someone who leads the VCI has at least competence in economics and an entrepreneurial spirit in managing the VCI without compromising our local culture, upholding the values of Tri Hita Karana, Tri Kaya Parisudha, Panca Sradha in every action he does and Catur Purusa Artha".

This excerpt indicates that the equality carried out in the recruitment of VCI managers and supervisors requires another selection process so as to find suitable and competent individuals so as to minimize fraud that occurs.

In this study, the researcher also conducted interviews with informants from legal practitioners with the profession as prosecutors where the following interview excerpts were conveyed. The existence of corruption cases that have occurred over the past 2 years in Bali is quite high, almost every district or city in Bali has legal cases related to the VCI. Especially in Denpasar, as of 2022, only 1 case has gone up to prosecution, but there are quite a lot of problematic related to VCI management. There are several factors that hinder the effectiveness of VCI management, namely when referring to the theory of the legal system, namely a) legal substance, namely legal problems occur because of the rules and systems that provide gap for deviation. It can be seen from the regional regulations and governor regulations which provide a fairly high discretionary gap to VCI officers, b) the legal structure is the existence of legal problems from VCI officers. Furthermore, the legal culture, the apathy of the society is high, the people are not critical of their environment and the culture of corruption which is considered normal. The dominant factor of the current VCI problem is the legal structure factor of the existing rules as well as the VCI *prajuru* factor itself. So that external and internal factors contribute to each other as the cause of deviations that occur in the VCI.

In the interview, it was also revealed point of view the solution to VCI problems should be, VCI managers work according to *awig awig* and/or *perarem*. With regard to existing doubts, immediately coordinate with LPLPD or ask for legal opinion from the legal head of the city or district government or the local district attorney's office. Meanwhile, customary parties to VCIs that do not yet have *awig-awig* and *perarem* related to VCI financial management immediately coordinate with related parties in this matter. Meanwhile, the regional government will immediately prepare a new regional regulation based on the results of an assessment of weaknesses in any regulations governing VCIs and immediately disseminate technical information on making *awig-awig* and *perarem* related to the technical management of VCI finances. The products that need to be made are related to a) strengthening of VCI as legal subjects of customary villages and entering the realm of adat. b.)related to the technical standardization of credit application and c) regulating the interest rate of the VCI itself so as to minimize deviations and losses that occur in the VCI. The hope in the future is of course the VCI created by Prof. I.B Mantra is in accordance with the objectives for the welfare of indigenous peoples in their environment.

Conclusion

How to create sustainability of the VCI cannot be separated from good governance as seen from transparency, accountability, responsibility, independence and fairness and equality applied in the management of the VCI. Given the interrelationships of various fields, including economics, law and culture, that support governance in VCI, the various limitations and problems that exist

must be addressed from various aspects that affect them so as to ensure the sustainability of the VCI in the community. The limitation of this research is digging up information from one object of research in the hope of seeing the positive side that has been implemented in VCI that exists and is healthy in its operations. Further research can certainly be developed again with in-depth interviews with more informants with various conditions so that more phenomena are found in the field so that they can provide solutions to problems in VCI.

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IMPLEMENTATION OF THE HARMONY OF INDONESIA'S SUSTAINABLE DEVELOPMENT GOALS AND SUSTAINABLE DEVELOPMENT OBJECTIVES PT. PERTAMINA (PERSERO): CLEAN AND AFFORDABLE ENERGY

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ABSTRACT

Goal – understand the implementation of the alignment of sustainable development goals and sustainability goals of PT. PERTAMINA (Persero) and its contribution to the 7th goal, namely clean and affordable energy.

Design/methodology/approach – the form of research is research with a qualitative descriptive approach. The method used is by reviewing the Sustainability Report document of PT. PERTAMINA (Persero) in 2020 and 2021.

Findings – The results showed that PT. PERTAMINA (Persero) has innovated environmentally friendly energy sources and new renewable energy (EBT). Refers to the Sustainable development Goals which contain 17 goals and 169 indicators. The findings can be stated that the alignment of sustainable development goals and PT. PERTAMINA (Persero). The company's activities have contributed to the 7th goal of clean and affordable energy.

Originality/value – this research has explored the implementation of corporate social responsibility activities that support sustainable development goals.

Keywords – Sustainable Development Goals, Sustainability Report, Corporate Social Responsibility

INTRODUCTION

Indonesia is a fast-growing country and could become the 4th largest economy in the world by 2050 (John Hawksworth, 2017). The issue of sustainable development is an important issue that continues to be socialized in the community. Sustainable development means development that meets the needs of the present without compromising the capabilities of the future, according to the United Nations Brundtland Report. Sustainable development answers human concerns about their lives due to limited natural resources in meeting their needs (Jannis Langer, 2021) Elkington's thinking through *the triple bottom line* includes *people, planet, and profit*, stating that development is a multidimensional effort to achieve a better quality of life for everyone. Economic development, environmental development, and social development are interconnected to support sustainable development. The implementation of development produces products in the form of waste, garbage, and waste in the form of solid, liquid, and gas, as well as pressure and noise levels. So it needs to be maintained so as not to exceed the threshold and the carrying capacity of the environment.

The United Nations (2015), has a Sustainable Development agenda within a framework for present and future people and planet. The UN resolution is that the *Sustainable Development Goals* (SDGs) are joint development targets until

2030. The SDGs involve 194 countries, *civil society*, and various economic actors throughout the world. This agenda is to answer the demands of world leadership in overcoming poverty, inequality, and climate change in the form of real action. The SDGs were ratified on September 25, 2015 consisting of 17 global goals with 169 targets. The SDGs are policy and funding guidelines for the next 15 years and are expected to be achieved by 2030. These goals and targets cover 3 (three) dimensions of sustainable development, namely environmental, social, and economic (Theresia, 2018).

In Indonesia, the government issued Presidential Regulation No. 59 of 2017 concerning the Implementation of the Sustainable Development Goals. The Government of Indonesia divides the SDGs implementation team into 4 participation platforms, namely, Government and Parliament, CSOs, Academics and Experts and Philanthropy and Business Actors. Have a moral obligation to participate and synergize in building partnerships with one another to realize the goals of sustainable development in Indonesia. The main principle of the SDGs is " *Leave No One Behind* ". The SDGs are universal/applicable to all countries without exception, both developed and developing countries have a moral obligation to create the SDGs global development agenda.

The company's business activities are expected not to harm the interests of the community and the environment. Regulations in the form of Law No. PT. 40 of 2007 states that the company has the right to use natural resources and human resources around it, but the company also has an obligation to account for all the consequences obtained from its operational processes (Miqdad, 2016) . So that the company is fully responsible for supporting the implementation of sustainable development goals.

Indonesia is one of the countries that supports and participates in the agreement in the UN meeting. Indonesia is committed to the SGDs program with the support of Presidential Regulation (Perpres) number 59 of 2017 concerning the implementation of achieving sustainable development goals (Sudirman & Rifai, 2021) . The following is a table of sustainable development goals that are on the joint agenda of all countries that are members of the United Nations.

Table 1: Sustainable Development Goals

No.	Goals	Description
1	No poverty	End poverty everywhere and in all its forms
2	Zero hunger	End hunger, achieve food security and better nutrition, and promote sustainable agriculture
3	Good health and well-being	Ensuring healthy lives and supporting well-being for at all ages
4	Quality education	Ensure inclusive and equitable quality education, while also supporting lifelong learning opportunities for all
5	Gender equality	Achieve gender equality and empower all women and girls
6	Clean water and sanitation	Ensure the availability and sustainable management of water and sanitation for all
7	Affordable and clean energy	Ensure access to affordable, reliable, sustainable and modern energy for all
8	Decent work and economic growth	Support inclusive and sustainable economic growth, full and productive employment, and decent work for all
9	Industry, innovation and infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10	Reduced inequalities	Reduce inequality within and between countries
11	Sustainable cities and communities	Building inclusive, safe, durable and sustainable cities and settlements

12	Responsible consumption and production	Ensure sustainable consumption and production patterns
13	Climate action	Take urgent action to combat climate change and its impacts
14	Life below water	Conserving and sustainably utilizing marine, oceanic and maritime resources for sustainable development
15	Life on land	Protect, restore and support sustainable use of terrestrial ecosystem, sustainably manage forests, combat desertification, and halt and reverse land degradation, and halt biodiversity loss
16	Peace, justice and strong institutions	Support peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels
17	Partnerships for the goals	Strengthen implementation measures and revitalize the global partnership for sustainable development

The Sustainable Development Goals (SDGs) are global action plans agreed by world leaders, including Indonesia, to end poverty, reduce inequality and protect the environment. The SDGs contain 17 Goals and 169 Targets that are expected to be achieved by 2030. The main principles of the SDGs are as follows; Universal Development Principles; Integration; No one left behind; Inclusive Principles (United Nations General Assembly, 2015). This principle is a shared vision for Indonesia involving stakeholders to achieve the SDGs consisting of the government, philanthropy, business actors, community organizations and the media as well as academics and experts. (Sudirman & Rifai, 2021). The Sustainable Development Goals (SDGs) define ways to achieve a better and more sustainable future for people from every corner of the world. The SDGs will answer global challenges in the form of poverty, inequality, climate change, environmental degradation, peace, and justice (Katekar et al., 2020) .

Energy has an important position because it relates to all aspects of human life. The report on the progress of sustainable development goals stated that SDG7 regarding the need for clean and affordable energy is still very lacking. Progress in the field of sustainable energy still does not meet the needs of energy access for everyone and has not met targets in energy efficiency and renewable energy (Hillerbrand, 2018) .

METHODS

This study uses a descriptive qualitative approach with the research location of PT. PERTAMINA (Persero). Data collection techniques through review of sustainability report documents. Researchers conducted a review of the Sustainability Report of PT. PERTAMINA (Persero) which is linked to the Sustainable Development Goals (SDGs) Agenda which consists of 17 goals and 169 targets. This article focuses on the 7th sustainable development goal, namely Affordable and clean energy.

DISCUSSION

The limited available energy sources have an impact on the utilization for the environment. Innovation in energy use is needed to ensure access to affordable, reliable, sustainable and modern energy. (Wohon et al., 2017). The increasing concern over potentially growing social problems raises questions about the contribution of business organizations to the achievement of sustainable development (Orazalin & Mahmood, 2020) . Energy is a driving force for the socio-economic development of every country (Ambade et al., 2017) . The world's population is experiencing an increasing need for energy which results in the world facing the problem of energy shortages. Sustainable Development Goals-7; ensure

access to affordable, reliable, sustainable and modern energy for all (Katekar et al., 2020) .

The form of the company's contribution is generally stated in the Sustainability Report. Likewise with PT. PERTAMINA (Persero) also reported the contribution made in Corporate Social Responsibility activities. Referring to its vision: to become a world-class national energy company. Mission: to run oil, gas and new and renewable energy businesses in an integrated manner, based on strong commercial principles. The company's main values: moral, trustworthy, competent, harmonious, loyal, adaptive, collaborative. Disclosure of sustainability reports is a form of company commitment in publishing sustainability reports. Sustainability reports provide information on accountability (Ihsani et al., 2021) .

Addressing energy needs through clean technology by 2030 (UN Sustainable Development Goal 7) requires rapid access through the use of limited resources. Energy access is one way to reduce endemic global inequality, which will require rapid progress in developing scientific and technological solutions in reducing costs that are appropriate without compromising good quality (Nathwani & Kammen, 2019) .

According to the Central Statistics Agency (2017) to achieve the 7 SDGs goals, namely: clean and affordable energy, the target is to increase energy efficiency (2015-2030), consists of targets, namely:

- 1) Proportion of population with access to modern cooking solutions, by urban/rural area;
- 2) Proportion of population with reliable access to electricity, by urban/rural area;
- 3) Implied incentives for low carbon energy in the electricity sector (calculated in US\$/MWh or US\$ per tonne of CO₂ to be avoided), and;
- 4) Prime level of energy intensity increase .

According to the 7th SDGs target indicators, namely:

1. By 2030, ensure universal access to affordable, reliable and modern energy services
2. By 2030, increase substantially the share of renewables in the global energy mix
3. By 2030, double the rate of energy efficiency improvements
4. By 2030, expand international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and more advanced and cleaner fossil fuel technologies, and encourage investment in energy infrastructure and clean energy technologies
5. By 2030, add infrastructure and improve the quality of technology to supply modern and sustainable energy services to all developing countries, in particular in least developed countries, small island developing countries, and landlocked developing countries, in accordance with their respective program assistance

Alignment of Sustainable Development Goals PT. PERTAMINA (Persero) with the SDGs, namely; 1. Minimum achievement of BLUE in PROPER assessment; 2. Indonesia's Energy mix target of 23% by 2025; 3. Achievement of total value creation through community empowerment programs; 4. Musicool sales increase 198 MT in 2024; 5. Biodiesel B30 during 2021; 6. Pertamina Turbo with EURO 4 standard with a maximum sulfur content of 50 ppm; 7. Pertamina DEX with a maximum sulfur content of 50 ppm equivalent to the EURO 4 standard in 2022

PT. PERTAMINA (Persero) in 2020, won the International Award for The 12th Global CSR Awards 2020, for various innovative and sustainable CSR programs. Awards were given by Global CSR for five categories that support the achievement of the Sustainable Development Goals (SDGs) targets, namely Quality Education; Responsible Consumption and Production; and Protecting Land Ecosystems . This means PT. PERTAMINA (Persero) has a significant contribution to the implementation of the *Sustainable Development Goals* in Indonesia.

Commitment to sustainability the implementation of sustainability values and principles, which are based on the Company's *Code of Conduct* . The implementation of sustainability includes a management system that supports sustainability issues in the form of environmental, social, and governance (LST) aspects in the Company's activities that support the Sustainable Development Goals (TPB). Environmental aspects prioritize health, safety, security and environment (HSSE) and environmental risk management. Social aspects, through the energy business approach, to transform into potential and opportunities for the development of the Company's market share. Aspects of governance through the development of leadership and professionalism as the basis for PERTAMINA personnel.

The company's commitment to building a culture of sustainability prioritizes the balance and preservation of nature, the environment and society in order to achieve sustainable business growth. Strategic initiatives of commitment to build a culture of sustainability are carried out in the form of: Sustainable community empowerment; Environmental conservation insight; Business strategy implements optimal provision of infrastructure. The scope of PERTAMINA's business activities in the field of energy business operations are: • oil and gas; • new and renewable energy; • other activities related to or supporting business activities in the energy sector, namely oil and gas, new and renewable energy; • development of the optimization of the company's resources.

Preparing for sustainability will be in line with global dynamics that prioritize the integration of commitments in the environmental, social, and governance fields in business strategies, as well as the Sustainable Development Goals. The Sustainability Policy is an integrated component of operational excellence at PERTAMINA to contribute to the Sustainable Development Goals (SDGs). Vision and mission of PT. PERTAMINA (Persero) is a leading and reputable Global Energy Company and is recognized as:

1. Environmentally Friendly, 2. Socially Responsible Company, 3. Have Good Corporate Governance

PT. PERTAMINA (Persero) is committed to:

- 1) Ensure the security of energy supply and access throughout the country.
- 2) Reducing greenhouse gas emissions, non-greenhouse gas emissions, releases, waste, effluents, and addressing broader climate change issues through managing regulatory, reputational, and/or market-related risks from climate change by integrating them into strategies and operations .
- 3) Protect and preserve the environment, water, natural resources, and energy through an environmental management system that will be monitored continuously.
- 4) Management and mitigation of the impacts of projects and activities on biodiversity with the aim of 'Net Positive Impact', by avoiding operational activities in areas with high biodiversity, and incorporating biodiversity aspects in project planning and operations.

- 5) Rehabilitate land after closure of operations to restore ecosystems, minimize negative impacts and maximize benefits, and set aside adequate funds for closure of operations and rehabilitation.
- 6) Implement the highest standards related to Health, Safety and Environment to maintain the health, safety and security of employees, contractor workers, communities, and customers, as well as prepare for and respond to emergencies, and prevent major accidents throughout the workplace.
- 7) Become a locomotive of social development to encourage social and economic development in the community.
- 8) Consult with stakeholders on environmental issues and with local/neighborhood communities on community development & engagement to improve their welfare.
- 9) Respect the rights of the communities/indigenous communities where the company operates, including promoting socio-economic development, supporting the fulfillment of social, economic, and cultural rights, protecting cultural sites, and avoiding coercion in the relocation of indigenous peoples/communities.
- 10) Work with partners and suppliers towards environmentally friendly and sustainable procurement of goods and services to ensure minimum impact on the environment.
- 11) Support the provision of products and services that comply with the principles of sustainability to customers.
- 12) Encourage sustainable employee development, fair treatment, and diversity in the workplace.
- 13) Increase the use of local manpower and contractors as long as they are in accordance with operational needs, especially through training and support programs for Micro, Small and Medium Enterprises (UMK) and key economic actors.
- 14) Ensure compliance with all legal requirements and uphold Good Corporate Governance in all activities.
- 15) Enforcing judgments regarding anti-corruption and anti-fraud practices within the Company

CONCLUSION

Full attention to energy fulfillment is carried out through innovation, behavioral and social changes and gradual system design. PT. PERTAMINA (Persero) according to its vision and mission has shown its contribution to the Sustainable Development Goals. There is good harmony and synergy in the implementation of the Sustainable Development Goals of PT. PERTAMINA (Persero). PT. PERTAMINA (Persero) has innovated environmentally friendly energy sources and new renewable energy (EBT). This shows that the company's activities refer to sustainable development goals which consist of 17 goals and 169 indicators. The company's activities that have contributed to the 7th goal of clean and affordable energy have been well implemented. PT. PERTAMINA (Persero) invites the surrounding community to implement the TPB program, especially Goals 7, affordable and clean energy for all. And for each individual to use energy wisely in daily life to maintain the balance of nature.

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IMPLEMENTATION OF THE TRIPLE BOTTOM LINE IN THE PHILOSOPHY OF *RWABHINEDA*
(Ethnographic Studies on the Desa Adat Tenganan Pegringsingan)

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Abstract

This paper aims to show that the implementation of the principles of the triple bottom line (ie, people, profit planet) which is based on the *Rwabhineda* philosophy (Bhunan Alit and Bhuana Agung) in the *Desa Adat* of Tenganan Pegringsingan, Karangasem-Bali. This research was conducted using qualitative methodologies, interpretive approaches and ethnographic methods in order to obtain more in-depth and complete information from the point of view of the informants. Data was collected by means of in-depth interviews, observation and documentation. The key informants in this study were *Krama Adat* (*Desa Adat* administrators) and *Krama Gumi* (indigenous people). The results of the study found that the *Desa Adat* of Tenganan Pegringsingan synergizes the implementation of triple bottom line with *Bhuana Alit* and also *Bhuanan Agung* in order to maintain the balance of nature. The novelty in this paper offers the concept of the Bali Aga (ancient Balinese) philosophy that can be used as a guide or organizational companion in implementing the triple bottom line.

Keywords: Triple Bottom Line (TBL), *Rwabhineda* philosophy, *Desa Adat* Tenganan Pegringsingan, and balance of nature

IMPLEMENTATION CARBON TAX IN THE PERSPECTIVE OF MAQASID ASH-SYARI'AH: TO SOLVE THE ENVIRONMENTAL PROBLEM

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ABSTRACT

Purpose - Understand the implementation of the carbon tax from maqasid ash-syariah perspective as a way to overcome environmental problems.

Design/methodology/approach – This research is qualitative research with descriptive approach. The method used to review the implementation of the carbon tax from maqasid ash-syariah perspective.

Findings – The result showed that the implementation of the carbon tax as an effort to overcome environmental problems has been in line with maqasid ash-sharia. In the maqasid ash-sharia developed by Ali Yafie explained that the importance of protecting the environment because it is a fundamental problem that is the primary need of everyone. So that the law of environmental preservation is an obligation for every people, both individuals and groups. Therefore, the role of the government is needed to be able to make regulations by considering the values of maqasid ash-sharia, especially regulations that can have an impact on the environment.

Originality/value – This research has explored the implementation of a carbon tax as an effort to protect the environment in the perspective of maqasid ash-syariah value.

Keywords – *Carbon Tax, Maqasid Ash-Syariah, Environment*

Integrated Socio-Environment & Economic Initiatives in Pursuance of Sustainable Mineral Mining Operation in Indonesia: Point of View from Amman Mineral Nusa Tenggara, Batu Hijau Mine Site – West Sumbawa Regency

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ABSTRACT

Indonesia is an archipelagic country with massive natural resources, one of the largest in the world, especially in the mining sector, both mineral and coal. In terms of managing the mineral mining sector, Amman Mineral Nusa Tenggara - AMMAN (previously operated by Newmont Nusa Tenggara) is an industry that manages and produces copper concentrate and has been operating for the last 22 years at the Batu Hijau mine site, West Sumbawa Regency. During its development of operation, AMMAN manages operational activities by pioneering the basis of sustainability in the environmental, economic, and social fields.

This paper discusses the AMMAN initiative in providing the best legacy for Indonesia by maintaining environmental sustainability and catalysing the development of human capital, sustainable infrastructure and an enabling environment for livelihoods, to enable dignified lives for all, including the most vulnerable and underrepresented groups. Some initiatives are building a 26 MW solar power plant to reduce fossil energy use and, simultaneously, becoming a pilot for zero-emission power plants. Another initiative is water management in reclamation and acid mine water reuse for operational activities. In managing 3R Solid Waste, the initiatives include using FABA waste as a road base, reuse of haul truck tire waste as an electric pole base, and plastic waste reduction by promoting tumblers as drinkable media for employees. In managing biodiversity, the Gili Balu conservation program was initiated and integrated with the socio-economic empowerment program to eradicate poverty and improve the livelihood of coastal communities.

All of these activities are in line with the sustainability principles in the Sustainable Development Goals (SDGs), which are also related to Environmental Social Governance (ESG) and Social and Environmental Life Cycle Assessment (S-E-LCA) in reducing environmental impact and optimizing the use of resources and 3R principal.

Keywords: Amman Mineral Nusa Tenggara, Sustainability, ESG, LCA, Indonesia.

INTRODUCTION

Indonesia is an archipelago comprising 17,000 islands spanning from Sabang in the westernmost part of Sumatra to Merauke in the easternmost part of Papua. Indonesia's abundant natural resources have placed the developing country in the global spotlight, especially in terms of environmental sustainability and its people's socioeconomic welfare. Environmental and socioeconomic sustainability aspects are also essential for energy resources management in the mineral and coal mining industry sector.

Amman Mineral Nusa Tenggara – AMMAN (previously operated by Newmont Nusa Tenggara), is a mineral company that manages copper and gold concentrate mining activities. AMMAN operates in the Batu Hijau mining site, 27 kilometers from the Sumbawa Barat regency capital in Taliwang, West Nusa Tenggara (see Image 1). The Batu Hijau mining site has been operating for the last 22 years and has contributed significantly to the development of the Sumbawa Barat regency and its surrounding areas, which in the end also contributes to national development. Throughout its career, AMMAN has committed itself to always incorporating elements of sustainable energy, environment, and community management into its operational activities in order to leave its best legacy for Indonesia.



Image 1. AMMAN's location in the Batu Hijau site, West Sumbawa Regency [1]

This paper discusses the AMMAN initiative in providing the best legacy for Indonesia by maintaining environmental sustainability and catalysing the development of human capital, sustainable infrastructure and an enabling environment for livelihoods, to enable dignified lives for all, including the most vulnerable and underrepresented groups. Not only that, the company's sustainability initiatives and programs also synchronize aspects of its operational activity material life cycle management, including adhering to principles of good environmental and social governance (ESG), which is a highly relevant element to the company's sustainability programs and initiatives.

APPROACH & METHODOLOGY

This paper emphasizes on discussing practical matters related to corporate sustainability programs, which seeks to provide insight on how such programs can be implemented and the parameters that should be used to evaluate their effectiveness. In order to provide such insight, this paper uses the following analytical methods and approaches:

- This paper evaluates each corporate sustainability initiative based on the life cycle management principle, which considers the resource utilization efficiency in each operational process.
- This paper also reports the carbon emission reduction from the Sejong solar power plant's 26 Megawatt (MW) capacity, which operates during daylight hours without using any batteries. The effectiveness of the carbon emission reduction initiative using renewable energy is measured based on the energy consumption results and the company's greenhouse gas emission reduction target.
- The discussion on energy efficiency aspects of the company's operations focuses on fuel optimization by reducing the cooling fan pulley component diameter on the Haul Truck 793-C radiator. This paper uses calculations from the trial results from its operational activities.
- The evaluation of the reduction of wastewater burden initiative is focused on the results from the management of storm water runoff in the established reclamation areas, which has now incorporated a canal system to reduce the burden on the mining acid water pool to direct the runoff to the bodies of water within the canal system.
- The water consumption efficiency initiative's evaluation focuses on results from reusing the mine-impacted water in the sediment ponds as part of the water resource reduce-reuse-recycle (3R) principle.
- The evaluation of the company's toxic and hazardous waste management initiative utilizes the fly ash bottom ash (FABA) waste from its coal power plant as one of the elements mixed into the mining reclamation access road base materials.
- The evaluation of non-toxic and hazardous waste management initiatives, which, among others, utilize used tires as a basic construction material for portable electric poles.
- The evaluation of biodiversity protection initiatives focused on conserving the Gili Balu area as an ecosystem conservation hub.
- The evaluation of community empowerment initiatives, focusing on beneficiaries living in the coastal area of Kenawa Island, Gili Balu, and the surrounding area, which is integrated into a tourism-based empowerment program.

DISCUSSION

In this section, we discuss AMMAN's experiences transforming its operational activities to create its best legacy for Indonesia, the country where it operates. As has already been explained in the previous section on methodology and approach, this paper focuses on the results of the corporate sustainability programs and initiatives without touching upon the technical planning aspects that preceded these results. The researcher might discuss the technical planning aspects of these programs and initiatives in a separate publication.

Life Cycle Assessment

AMMAN has already pioneered the use of an inventory to assess the environmental impacts of copper concentrate mining activities. The scope of study it carries out focuses on the Cradle to Gate system of Company AMMAN’s operational activities, starting from the production and transportation of auxiliary materials and land preparation as the cradle; mining and processing of ore as the main activities to concentrate product shipment process as the gate [2]. This research study has undergone a critical review phase to assess and analyse the effectiveness and validity of the company’s activities. A glimpse of the company’s resources management inventory is shown in Image 2, which has to do with a water efficiency program based on a life cycle management approach.

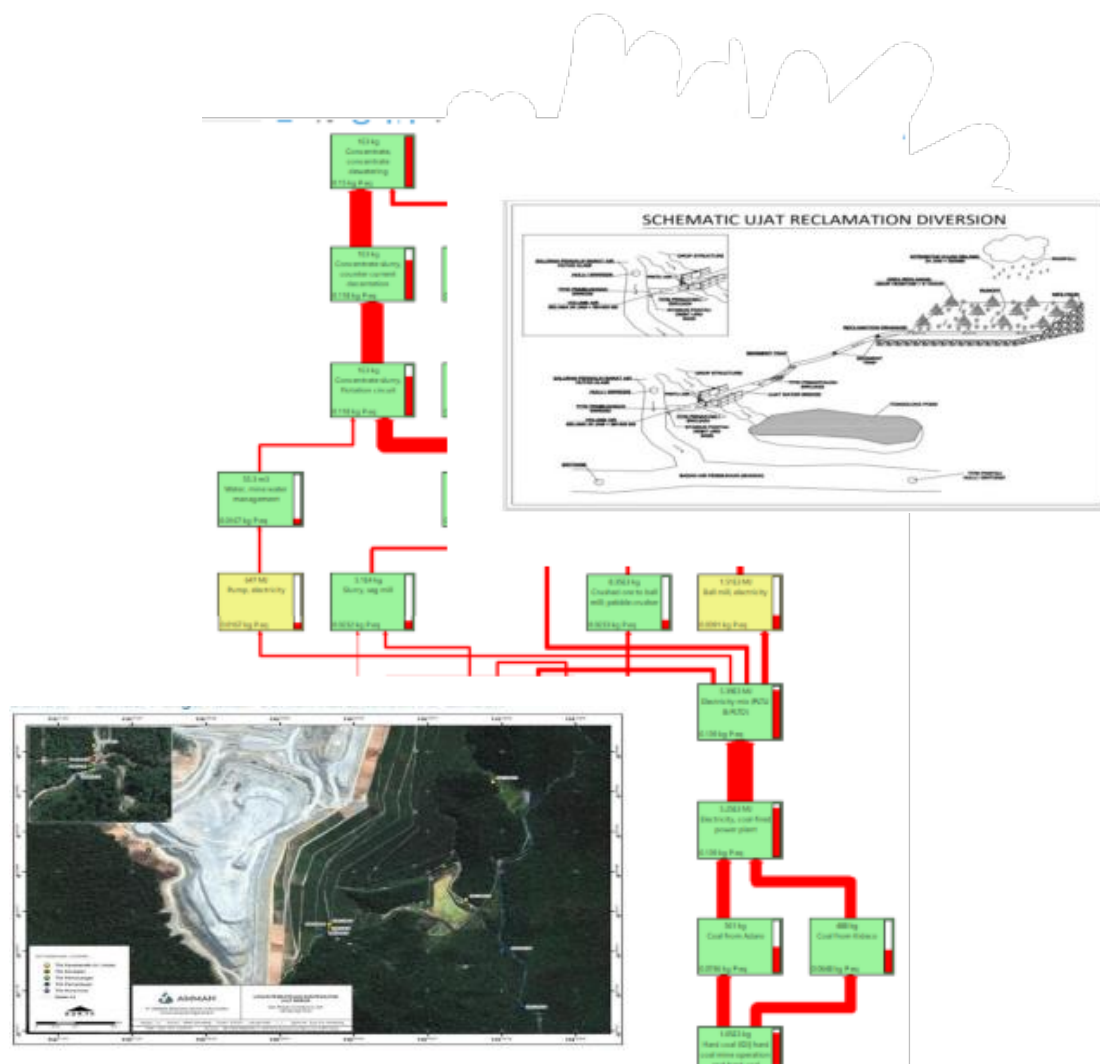


Image 2. Water Efficiency Program Based on Life Cycle Management Approach [3]

Looking forward, the evaluation of the life cycle management approach can be upgraded to include impact evaluation, as well as the declaration of environmentally friendly products, based on integrating environmental impact control into the company’s operational activities.

Energy Efficiency: The reduction of the Cooler Fan Lifter Component Diameter on the Haul Truck 793-C radiator.

AMMAN’s operational activities utilize the CAT 793 Haul Truck to transport the results of its mining activities. To transport the materials produced, 124 units of the Haul Truck 793 operate on a daily basis, fuelled by the B30 biodiesel. The effectiveness of the mining vehicle greatly influences the amount of fuel used, which ultimately will affect the level of carbon emission produced.

The reduction of the diameter of the radiator cooling fan pulley component from 297 millimeters (mm) to 275 mm has automatically decelerated the radiator cooling fan by 6 percent, thus reducing the B30 biofuel consumption by 16.5 litres per hour per truck, bringing carbon emission down more than 62,000 ton per year^[4]. The program is visualized in Image 3.

1. HT050 installed with new 8 blade fan (362-7762) with standard large pulley. 2. HT053 installed with new 8 blade fan (362-7762) with 6% speed reduction small pulley. 3. HT070 installed with old 11 blade fan (110-2735). With standard large pulley.											
Unit Number	Route	Dlog date	Dlog time	Start Time	End Time	Δ Time	Start Distance	End Distance	Δ Distance	Fuel Consumption	
HT050	SH03 to Kanloka	20-Dec-17	10:43:26 AM	10:52:02 AM	10:58:02 AM	0:06:00	2049	3163	1114	36,7469	
HT053	SH03 to Kanloka	20-Dec-17	10:21:54 AM	10:30:46 AM	10:36:16 AM	0:05:30	2040	3152	1112	33,3937	

Image 3. The results of reducing the cooler fan pulley component diameter on the Haul Truck 793-C radiator

Since 2019, this small crankshaft pulley has been installed on 104 Haul Truck-793 units. This innovation supports the sustainable development goals number (9) Industry, Innovation & Infrastructure, (12) Responsible Consumption & Production, and (13) Climate Action.

Emission Reduction: Implementing the 26MW Sejong Solar Power Plant

AMMAN has initiated an energy transition program for its electric energy source as part of its energy conservation and emission reduction initiatives. The first initiative is to implement the development of a renewable energy source by constructing the Sejong Solar Power Plant, with a total capacity of 26 megawatts (MW). The Sejong Solar Power Plant was commissioned in May 2022 and connected with the company’s grid. The renewable power plant has reduced carbon dioxide emissions by 2,721 tons as of June 2022 and will reduce up to 46,000 tons per annum^[5].



Image 4. The 26MW Sejong Solar Farm [6]

This initiative supports sustainable development goals number (7) Affordable Clean Energy, (12) Responsible Consumption and Production, and (13) Climate Action.

Hazardous Waste Management: The Utilization of FABA as Roadbase Material

As part of Company AMMAN's effort to reduce, reuse and recycle toxic and hazardous waste, the company also utilizes the fly ash and bottom ash (FABA) waste resulting from its coal power plant activities. The FABA waste is used as a raw material for road base mix on the mining reclamation access road up to 17,000 m³/year. The Ministry of Environment and Forestry (MoEF) has issued permits for this activity. Look at Image 5 for more information on program implementation.



Image 5. The use of FABA as Roadbase material [7]

On average, this initiative uses approximately 100% of FABA produced per annum, reducing the use of soil from the land clearance process as a raw material. This unused soil can later be used for the mining closure process. This initiative supports sustainable development goals number (9) Industry, Innovation, & Infrastructure, (12) Responsible Consumption and Production, and (13) Climate Action.

Solid Waste Management: Utilizing Used Tyre as Hardening Material for Portable Electric Poles

The term “used tire” refers to Hauling Truck tires which have already expired, generally after being used for 2,500 hours, or equal to 3.5 months of operation. After turning into a non-toxic and hazardous solid waste, commonly used tires idle in a waste rock dump, thus not being utilized well. Currently, however, the company has come up with innovative ways to utilize used tires as a hardening material to make portable electric poles. The activity is documented in Image 6.



Image 6. Utilization of Used Tyre as Movable Electric Poles Application

To date, about 100 tons per annum on average of used tires around the Batu Hijau mining sites have been utilized as a hardening material for the portable electric poles ^[8]. This program supports sustainable development goals number (9) Industry, Innovation, & Infrastructure and (12) Responsible Consumption & Production.

Water Efficiency: Reusing Mining Waste Water Effluent for Process Plant Water Use

AMMAN’s copper and gold mining activities produce acid wastewater, processed in sedimentation control structure (SCS) ponds. After it is processed, the acid wastewater can be utilized to power the concentrate manufacturing process to reduce groundwater use. Image 7 shows the location of an SCS pond and pump facility to use the mine water in the processing plant.



Image 7. The Mining Wastewater Processing Location at SPS Santong 3 [9]

This initiative has also supported water efficiency initiatives by saving groundwater usage. This initiative promotes sustainable development goal number (12), Responsible Consumption and Production.

Wastewater Management: Ujat Reclamation Diversion (URD)

Part of the reclamation area managed by company AMMAN is called “Ujat,” which means civet in the local Sumbawan language. In the beginning, it was discovered that the rainwater runoff around the Ujat area also discharged to the SCS, thus adding to the processing burden. Therefore, this reclamation site modifies the water flow by applying a 145 m³/s capacity canal system to flow the good quality rainwater runoff from 166 Ha of established reclaimed area directly to the bodies of water. Image 8 shows the location of the canal to manage the water at the Ujat reclamation site.

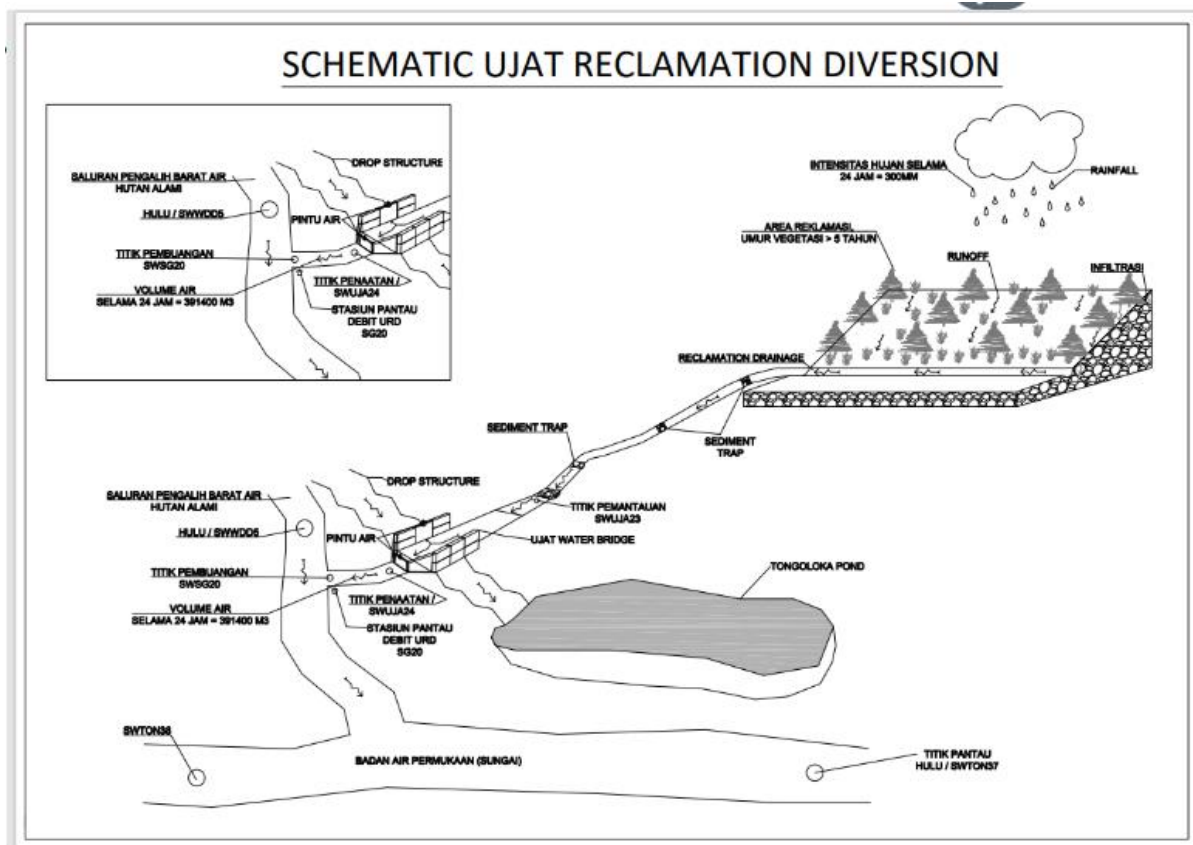


Image 8. Water Management in Ujat Reclamation Area [10]

This program is still under the commissioning process. Two different reclamation runoff diversion facilities have been in operation in separate locations: the Tongoloka Reclamation Diversion and the Kanloka Reclamation Diversion. This program supports the sustainable development goals number (12) Responsible Consumption and Production, and (14) Life below Water.

Biodiversity Conservation: In the Gili Balu and Kenawa Island Areas

The word Gili Balu comes from the Sumbawan language, meaning “Eight Islands.” The Gili Balu comprises an integrated conservation area vital to protecting ecosystem balance in the sea and the coastal regions. The conservation area also includes Kenawa Island, a populated island that unfortunately has not been well-managed, despite its high accessibility for humans. Image 9 shows the map of Gili Balu.



Image 9. The Kenawa Island and the Gili Balu Conservation Area [11]

The conservation activities conducted on Kenawa Island include deploying and monitoring artificial reefs and releasing the green turtle, which has been classified as endangered since 2022 by the IUCN Redlist of Threatened Species. Image 10 shows the conservation process.



Image 10. Reef and Green Turtle conservation on the Kenawa Island

To date, about 5,000 green turtles have been released in West Sumbawa Regency as part of a biodiversity program managed by AMMAN [12]. This program also supports Sustainable Development Goals number (13) Climate Action, (14) Life below Water, and (15) Life on Land.

Community Development: Empowering the Locals in the Kenawa Island through the Development of Ocean Tourism

One of the integrated conservation activities in Gili Balu is the development of locals' professional skills through ecotourism training, beach clean-up activities, repair of local tourism infrastructure, as well as several research studies analysing the potential of coastal areas for tourism. This community empowerment activity is a concrete action to achieve environmental, economic, and social sustainability in the area. Image 11 shows community empowerment activities on Kenawa Island.



Image 11. Pilot Community Empowerment Projects

This program was pioneered in 2022 and will continue to be developed in the future. Until today, the Gili Balu management has received lots of support from the local tourism industry task force and business players. The Pototano village administration and the local fishermen also play a crucial role in making this program possible [13]. This activity supports sustainable development goals (1) No Poverty, (2) Zero Hunger, (6) Good Health and well-being, (8) Decent Work and Economic Growth, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life below Water, (15) Life on Land, and (17) Partnerships for the Goals.

CONCLUSION & RECOMMENDATION

Some conclusions from our analysis of AMMAN's sustainability initiatives are:

- The initiatives conducted by AMMAN in supporting operational sustainability aspects are divided into three main components:
 - The management of mining activities comprising hauling, mining, acid water management, wastewater pollution prevention, including the optimization of raw material reuse as product components for supporting activities.
 - Other supporting activities include the shift toward the utilization of renewable energy, like solar farms, and the utilization of fly ash bottom ash waste from its steam power plant.
 - Supporting the improvement of the Gili Balu ecosystem and residents' social welfare.

All these activities support various aspects of the sustainable development goals (SDGs).

- In principle, the sustainability aspect of the initiatives conducted by AMMAN has also supported the establishment of the circular economy system, both from the company side as well as from the societal side, with its life cycle thinking principle based on good governance in alignment with the environmental, social governance (ESG) rules.

Several suggestions for AMMAN to further improve and develop its sustainability initiatives are as follows:

- Mapping program areas to integrate all related sustainability aspects into a single initiative;
- Developing innovations based on sustainability principles; and
- Expanding the scale and impact of ongoing programs.

ACKNOWLEDGEMENT

The authors thank the management of AMMAN and its entire team which have already implemented the program to the best of their abilities, thus creating collaboration among parties in supporting society's welfare through the good governance and practices initiated by AMMAN. The authors also thank local community groups and related stakeholders who have participated in managing the ecosystem around the Sumbawa Barat regency.

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NET ZERO GREEN HOUSE GASES STRATEGY IN THE ROTARY KILN OF THE PORTLAND CEMENT INDUSTRY

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ABSTRACT

The International Energy Agency estimates that by 2020 the world will produce 4.3 Gt of Portland cement. Portland cement has around 0.87 tons of CO₂/ton Portland Cement, contributing about 8% of total global CO₂ emissions. In addition to CO₂ emissions, Portland cement production uses a tremendous amount of energy, which is 10-11 EJ per year or about 2-3% of global energy use. These two problems mainly occur in the rotary kiln unit, where the clinker formation reaction occurs before it becomes the Portland cement. The study aims to investigate the strategy and optimization of the rotary kiln in CO₂ emissions as a form of support in realizing the SDGs related to climate change management. The research method design is conducting a literature review, simulation, and optimization to produce CO₂ emissions produced in a rotary kiln using simulator. Simulation of the variation of feed material entering the rotary kiln and variations of the rotary kiln configuration, whereas the optimization from the amount of CO₂, energy, and clinker composition. The targeted result of this study is to obtain the optimum feed composition and rotary kiln configuration that produces the lowest CO₂ emissions and requires the lowest energy but with the best clinker composition.

Keywords: carbon dioxide; clinker; Portland cement; rotary kiln; simulator

Nurhayati, Gugus Irianto, Lilik Purwanti, Rosidi. Master Program in Accounting Faculty Economics and Business, Universitas Brawijaya. 2022. **Nobel Indonesia, University Social Responsibility Based on Dr Soetomo's Thoughts.**

This study explores the meaning of University Social Responsibility (USR) based on Dr. Soetomo's thoughts. This study uses the interpretive paradigm and transcendental phenomenology of Edmund Husserl in analyzing the phenomenon of USR implementation by informants. Husserl's phenomenology has four conceptual components as the unit of analysis, namely intentionality, noema and noesis, intuition, and intersubjectivity. This study uses in-depth interviews to describe how the informants interpret the implementation of USR.

University Social Responsibility implemented by Dr. Soetomo University is understood as the embodiment of values that have grown and developed in it. These values are constructive towards the realization of populist values, nationality towards a Noble Indonesia. The process of implementing USR is based on a populist and nationality perspective at Dr. Soetomo University is a series of field practice agendas that are measured and simultaneously carried out by lecturers and students in assisting the community. The strategy carried out by the Dr. Soetomo University in implementing USR was carried out by identifying problems in the community, in collaboration with the government.

Keyword: Dr Soetomo, USR, Nationality, Populist, Noble Indonesia.

Professional Management Role In the Implementation of Corporate Governance and Corporate Social Responsibility for Business Sustainability

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ABSTRACT

This study aims to determine the role of professional management in good corporate governance and corporate social responsibility for the sustainability of the company's business. This research is a literature study, the results of this study find that the application of new principles can make it easier for market participants to adjust the implementation of the principles of Good Corporate Governance with changes and business growth to date. In addition, the application of Good Corporate Governance principles and social responsibility reports can encourage the growth and sustainability of companies in Indonesia. Finally, the application of these principles can encourage company resilience and economic growth in normal or crisis conditions.

Keywords: Professional Management, Governance, Environmental Social Responsibility, business sustainability.

1. Problem Background

In the face of global competition, companies are trying to maintain their survival and also expand their business to gain a wider market share, so management must try very carefully how to anticipate uncertainty in the global economy.

Management in this case has a very important role in developing its business, therefore management must work professionally and have full responsibility to fulfill the wishes of the shareholders, namely the welfare of the shareholders and meet the demands of the stakeholders.

Management as an agent of shareholders based on Agency Theory must be able to account for what is assigned by the shareholders in the form of an accountability report. The thing that must be done by management is corporate governance, this is very important to do because it involves the sustainability of the company's business, without good governance it is impossible for the company to achieve the goals set in the company's vision and mission, besides that it must also pay attention to the responsibility social environment in which the company is located, both the natural environment and the community around the company.

Consumers today have thought carefully, that is, they will buy products that are environmentally friendly, meaning they do not destroy nature, because they are aware of the effects of industrial technological advances which have a negative impact on the natural environment and society. Consumers will buy products that do not harm the environment.

Based on the background of the problem, the researcher tries to discuss in this paper the role of professional management in the implementation of corporate governance and corporate social responsibility for business continuity.

2. Problem Identification

The problems that will be discussed in this research are:

1. The role of professional management.
2. How professional management implements corporate governance.
3. How professional management implements corporate social responsibility.
4. How is the management in implementing corporate governance and corporate social responsibility towards business sustainability?

3. Theoretical Foundation

3.1 Professional management

In managing the company, management must be professional with high integrity so that what is expected by stakeholders and shareholders can be fulfilled. Therefore, it is necessary to know in advance the definition of professionalism and integrity in order to better understand the role of management in an organization.

Professionals are people who have professions or full-time jobs and live from that work by relying on a high skill. While the profession (De Goerge) is work that is carried out as a main activity to produce a living and which relies on a skill. So, the professions are:

- a. Rely on a special skill or expertise;
- b. Carried out as a main activity job (full time);
- c. Implemented as the main source of livelihood;
- d. Executed with deep personal involvement.

In addition, in carrying out their duties based on agency theory between the principal (shareholders) and management, there is an ethics that must be maintained and carried out with full responsibility, namely the principles of the professional code of ethics are:

1. **Responsibility**, for the implementation of the work and for its results as well as for the impact of the profession on the lives of other people or society in general.
2. **Justice**, this principle requires us to give to anyone what is their due.
3. **Autonomy**, this principle demands that every professional has and is given the freedom to carry out his profession.

Management in this case is all levels in the organizational structure from the operational level to the level of strategic decision making, including employees who work for the entity.

To carry out the tasks assigned by the shareholders, professional management must meet these requirements, namely having professional ethics and what needs to be considered is integrity.

Integrity is an element of character that underlies the emergence of professional recognition. Integrity is a quality that underlies public trust and is a benchmark for members in testing the decisions they make. Be honest and forthright without having to sacrifice the recipient's secret. (Sri Mayrawati Eka Turyani, 2013).

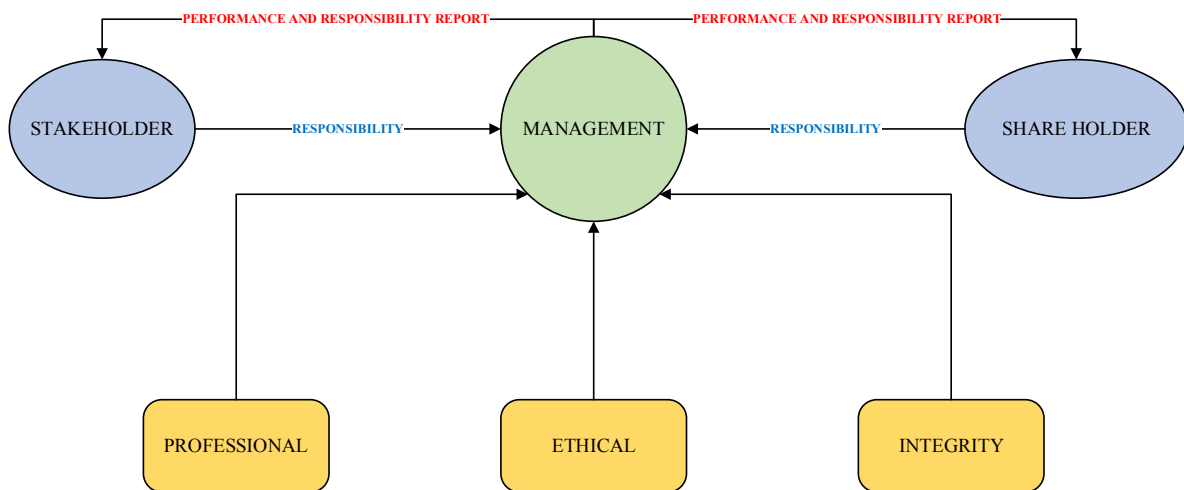


Figure 1 Management relationship with shareholders and stakeholders

3.2 Corporate Governance

Professional management must be able to apply good corporate governance (Corporate Governance), the low implementation of Good Corporate Governance (GCG) in Indonesia has an impact on the low competitiveness of products and the competitiveness of companies in Indonesia. The low competitiveness of companies in Indonesia is inseparable from organizational culture (Wibowo, 2014).

Understanding Corporate Governance

The general understanding of governance is a series of processes, habits, policies, rules, and institutions that influence, direct, manage, and control a company or corporation. https://id.wikipedia.org/wiki/Organization_kelola_company

Meanwhile, corporate governance is a system designed to direct the management of the company in a professional manner based on the principles of good corporate governance. <https://www.idx.co.id/about-bei/tata-kelola-enterprise/>

In the era of digitalization, the business climate is increasingly dynamic. This encourages all business people to continue to be responsive and resistant to significant changes. The uncertain condition of the global economy and national politics has increasingly made business actors realize that their business must be built and managed properly.

The Principles of Corporate Governance (2015), put forward by the OECD (Organization for Economic Co-operation and Development) are: “A structure consisting of shareholders, directors, managers, a set of goals to be achieved by the company, and the tools will be used in achieving goals and monitoring performance.”

In order to develop the implementation of good governance in the Capital Market industry which is the reference for the practice of a good governance system by the National Committee on Governing Policy (KNKG) (2004) based on the Decree of the Coordinating Minister for Economic Affairs Number KEP/31/M.EKUIIN/08/1999, referring to The principles published by the OECD are one of the institutions that play an important role in the development of Good Governance for both the government and the business world. Governance (governance) as "a system that regulates the relationship between various parties

within the company in determining the direction and policies of the company." The application of good governance must be carried out by companies in dynamic conditions such as today by professional management.

Why is Good Corporate Governance (GCG) important?

Nowadays, the higher level of competence makes companies compete to always increase profits, which sometimes causes problems both inside and outside the company. This problem can have an impact on many things ranging from fraudulent acts, embezzlement of money, corruption, to abuse of authority that can harm shareholders and stakeholders.

Corporate governance must apply the principles of Good Corporate Governance (GCG). Every company, whether small or large, new or old, must always apply the principles of GCG, which are commonly known as **TARIF** (Transparency, Accountability, Responsibility, Independence, Fairness).

The concept of this **TARIF** is able to manage the company properly and optimally in accordance with applicable regulations. According to the Ministerial Regulation BUMN 1/2011, there are principles for implementing governance as follows:

1. Transparency
2. Accountability
3. Responsibility
4. Independency
5. Fairness

The description is as follows:

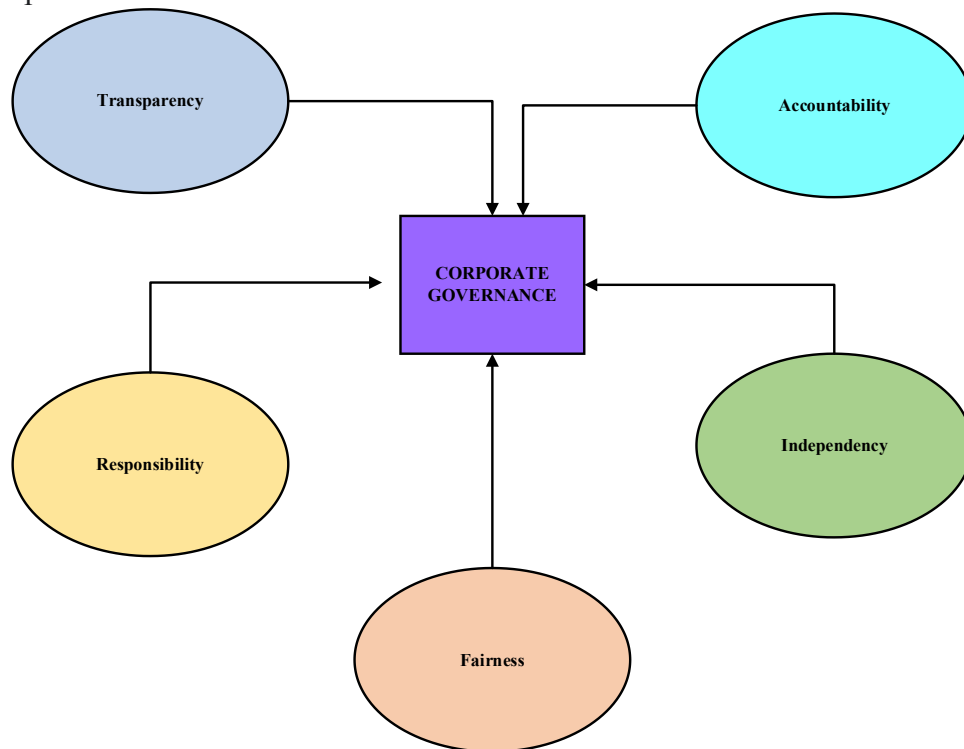


Figure 2 Corporate Governance

1. Transparency

Transparency or openness in every activity of the company, both in the decision-making process and in the disclosure of company material and related information, the company must provide important and relevant information in a way that is easily accessible and understood by stakeholders.

Companies must not only actively disclose issues required by legislation, but also disclose important matters for decision making by shareholders, creditors and other stakeholders.

2. Accountability

Accountability is accountability for the implementation of tasks based on the authority possessed by various organs of the company including shareholders.

Companies must be able to account for their performance in a transparent and fair manner. For this reason, companies must pay attention to the interests of shareholders and other stakeholders, as well as manage them appropriately, measurably, and in line with the interests of the company.

3. Responsibility

Responsibility is the company's responsibility to comply with the principles of a healthy company and the applicable laws and regulations in managing the company. Companies must also fulfill their responsibilities to society and the environment in order to maintain long-term business continuity.

4. Independency

Independence is a condition in which the company is managed professionally without any interrelationships with the interests of other parties.

Companies must be managed independently and various company organizations must not control each other and there is no intervention from any party.

5. Fairness

The fairness and equity of the company's handling of interested parties is carried out with appropriate standards and proportions. The company must follow the principles of fairness and justice and always pay attention to the interests of shareholders and other stakeholders.

The legal basis or references that can be used as standards for corporate governance are:

1. Komite Nasional Kebijakan Governance (KNKG): General Guidelines GCG (2006); *Guidelines Good Public Governance* (2010).
2. *International Social Security Association (ISSA): ISSA Guidelines for Good Governance* (2013)
3. *Organisation for Economic Co-operation and Development (OECD): Principles of Corporate Governance* (2015)
4. *International Finance Corporation (IFC) and Otoritas Jasa Keuangan (OJK): Indonesia Corporate Governance Manual* (2018)

The application of GCG principles in corporate governance can create a good, healthy and balanced corporate environment. <https://grc-indonesia.com/tata-kelola-perusahaan/>

1. Regulation Otoritas Jasa Keuangan [POJK] No. 21/POJK.01/2015 regarding the implementation of Corporate Governance public company, and
2. Circular Letter Otoritas Jasa Keuangan [SEOJK] No. 32/SEOJK.01/2015 Corporate Governance Guideline for public company.

One of the institutions that assess Governance in Indonesia is: *The Indonesia Institute of Corporate Governance (IICGP)* through *Corporate Governance Perception Index (CGPI)* with indicator:

Table 1 Rating Indicator *Good Corporate Governance (GCG)*

Aspects and Indicator	Weight [%]
Governance Structure	25,75
Governance Process	43,00
Governance Results	31,25
Total	100,00

Source: IICG

The results of these indicators are put into the following categories:

Table 2 Evaluation Good Corporate Governance

Category	Scoring Score
Very Reliable	85,01 - 100,00
Trusted	70,01 - 85,00
Quite Reliable	55,01 - 70,00
Source: IICG	

The benefit of the company implementing Good Corporate Governance is that the resources owned by the company's shareholders can be managed properly, efficiently and used for the benefit of the company's growth (value). All of this is done by the company to be able to advance and compete in a healthy manner. Good Corporate Governance not only has a positive impact on shareholders but also for the wider community in the form of national economic growth.

3.3 Social and environmental responsibility (Corporate Social Responsibility, CSR)

Corporate social responsibility or social and environmental responsibility is a concept that companies have various forms of responsibility to all their stakeholders in all aspects of the company's operations including economic, social and environmental aspects. Directly related to the concept of sustainable development, social and environmental responsibility can be formulated as a combination of companies towards sustainable development goals by managing impacts on all stakeholders (https://id.Wikipedia.org/wiki/responsibility_social_company)

According to Kotler and Lee, there are six models of Corporate Social Responsibility, namely: (1) cause promotion, (2) cause related marketing, (3) corporate social marketing, (4) corporate philanthropy, (5) community volunteering and (6) social responsibility business practice. (Kotler, Phillip and Nany Lee, 2005 Corporate Social responsibility: doing the most good for your company and your cause, United States).

Social responsibility is regulated in Article 74 paragraph (4) of Law Number 40 of 2007 (July 2007) regarding limited liability companies and Law Number 25 of 2007 concerning investment. Crucial issues include:

1. Limitation/wide scope of the company that is obliged to carry out social and environmental responsibilities;
2. Synchronization and harmonization of laws and regulations governing social and environmental responsibilities;
3. Legal sanctions for companies that do not carry out social and environmental responsibilities;
4. The link between social responsibility and partnership and environmental development programs that specifically applies to State-Owned Enterprises (BUMN).

Social and environmental responsibility is contained in Article 1 Number 3 of the Limited Liability Company Law, namely: "The company's commitment to participate in sustainable economic development in order to improve the quality of life and the environment that is beneficial, both for the company itself, the community, and society in general".

The description is as follows:

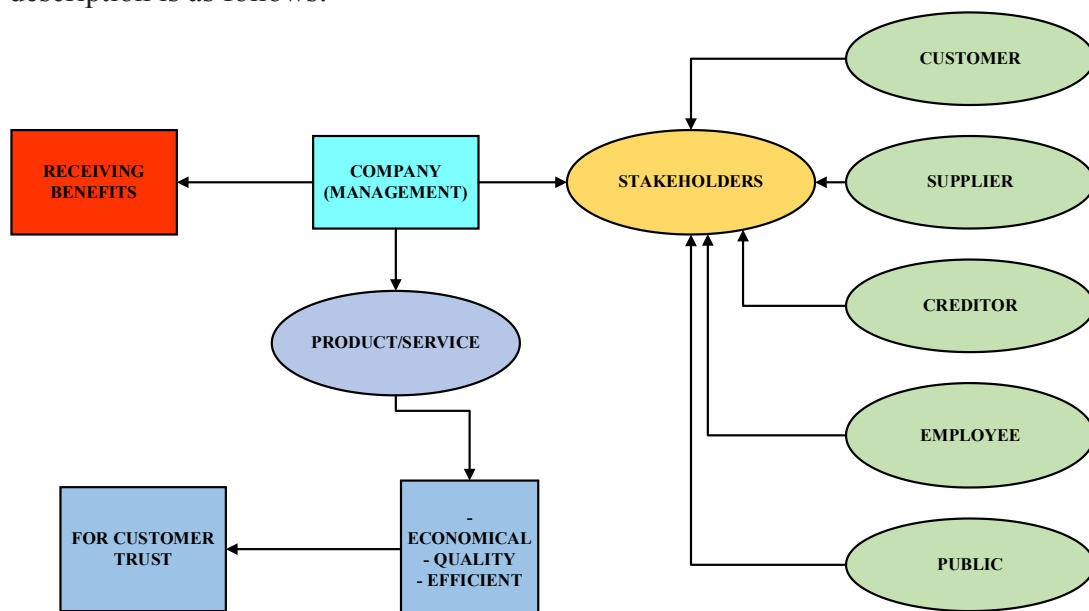


Figure 3 Company's relationship with stakeholders

Based on Figure 3, the company (management) must obey the rules and regulations per national and regional laws, for example:

1. Comply with labor laws
2. Complying with the rules of fair business competition
3. Comply with consumer protection regulations
4. Comply with tax regulations
5. Comply with company activity reporting rules
6. Comply with human rights regulations
7. Complying with the principles of good and sustainable environmental management

In principle, Corporate Social Responsibility aims for companies to contribute to the progress and improvement of the welfare of the local community in the form of:

1. Empowering the people's economy in the form of fostering Micro, Small and Medium Enterprises (MSMEs);
2. Public health and education services;
3. Provision of public facilities and infrastructure.

The benefits of CSR for companies are: “Creating a brand image, customer loyalty and license to operate. Corporate Social Responsibility as a legal obligation is regulated in Article 74 of the Limited Liability Company Law and does not conflict with Article 28D paragraph (1) in conjunction with Article 28 I paragraph (2) in conjunction with Article 33 paragraph (4) of the 1945 Constitution (Undang - Undang Dasar 1945).

The limitation of a company that is obliged to carry out CSR is a "company" that carries out its business activities in the field of and/or related to natural resources, and a company that does not manage and do not utilize natural resources but its business activities have an impact on the functioning of natural resource capabilities.

Legal Foundation:

1. Law Number 7 of 2007 concerning water resources, in particular Article 47 paragraphs 3, 52, and 85.
2. Law Number 41 of 1999 concerning forestry, in particular articles 30,33,48 paragraphs (3) and 50 paragraphs (2)
3. Law No. 22 of 2001 concerning oil and natural gas in particular Article 40 paragraph (2) (3) and paragraph (5)
4. Government regulation number 47 regarding the implementation of corporate social and environmental responsibility (April 2012) that the implementation of social and environmental responsibility is disclosed in the company's annual report and is accountable to the General Meeting of Shareholders (GMS)
5. Financial Services Authority (OJK) Regulation Number 29/POJK.04/2016 concerning the annual report of issuers or public companies chapter II article 4 states that social and environmental responsibility is one of the information that must be disclosed in the annual report
6. Financial Services Authority Circular Letter (SEOJK) Number 30/SEOJK.04/2016 concerning the form and content of the issuer's annual report part III, number 1, letter a that social and environmental responsibility information is a minimum component of the annual report, letter h that the presentation information on social and environmental responsibility can also be presented in a separate report.
7. In 2017 the Financial Services Authority (OJK) issued POK number 51/POJK.03/2017 dated 18 July 2017 concerning the implementation of sustainable finance for financial service institutions, issuers and public companies, preparing a sustainability report can be prepared separately from the annual report, but consider those that are not separate from the annual report and must be reported to the Financial Services Authority.

The BUMN partnership program is the Partnership and Community Development Program (PKBL) regulation of the Minister of BUMN No. PER -05/MBU/2007 is an elaboration of Law number 19 of 2003 concerning BUMN, especially article 08 in article 2 paragraph (1) in conjunction with article 30 paragraph (1) the success of PKBL is one of the indicators for assessing the health level of the relevant BUMN.

The Corporate Social Responsibility disclosure standard in Indonesia refers to the Global Reporting Initiative (GRI) standard because it focuses more on the disclosure standards

of various economic, social, and environmental performances of companies with the aim of improving the quality and utilization of sustainability reports (Siti, 2015)

GRI is a network-based organization that has pioneered the development of the world, mostly uses the sustainability reporting framework and is committed to continuous improvement and implementation around the world (www.globalreporting.org).

The disclosures made by the company in accordance with the requirements of GRI include 79 items in the form of: economic, environment, labor practices, human rights, society, and product responsibility. Furthermore, given a score of 1 for those who are disclosed and a score of 0 for those that are not disclosed, the CSR Index calculation is calculated as follows:

$$CSRI_t = \frac{\text{Amount disclosed}}{79} \times 100$$

In addition, there are also many rating companies or those who assess CSR using predetermined standards, such as the Srikehati Index. Based on the description above, management must pay attention to CSR and be accountable for it in the annual report both to the public and to shareholders and other stakeholders.

4. Discussion

Based on problem identification and theoretical basis, it can be described as follows:

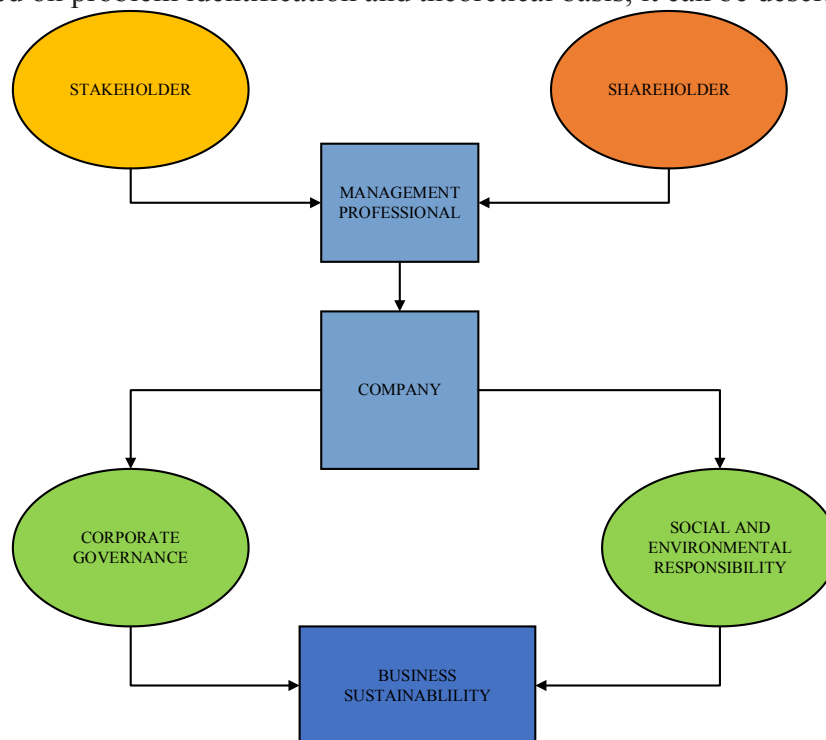


Figure 3 Formula of the problem

The role of professional management in carrying out its business processes as agents of the shareholders must be able to account for whether the company has been carried out in accordance with the mandate and has complied with all the rules related to the management of the company.

Professional management must have high ethics and morals and not be concerned with the interests of themselves or their groups. Have and meet the following criteria: (1)

Honesty, (2) Integrity, (3) Keeping promises, (4) Loyalty, (5) Fairness/fairness, (6) Likes to help others, (7) respect for others, (8) Responsible citizenship, (9) pursuit of excellence, and (10) have responsibility.

With the above background, it is hoped that professional management can implement good corporate governance (Good Corporate Governance) without deviating from the goals that have been set and directed from the start.

The key to business continuity lies in whether management can really be trusted in carrying out its business processes that have been entrusted to it by shareholders and how to meet the needs of other stakeholders, each of which has its own interests in the organization.

In the principles of corporate governance published by the OECD (OECD CG Principles) it is stated that the corporate governance framework should promote transparency and efficient markets, be in line with the rule of law, and clearly divide the obligations and responsibilities among the authorities carrying out the supervisory function, regulation and enforcement (OECD, 2004). The corporate governance framework in Indonesia is based on the following principles: transparency, accountability, responsibility, independence, and fairness and equity (KNKG, 2006).

The principles of governance are basically in line with the principles contained in Pancasila and the 1945 Constitution. By referring to the hierarchy of laws in Indonesia, these principles are derived more concretely in various laws and regulations.

In relation to Corporate Social Responsibility, companies are also required to maintain the environment around the company, both in the natural environment and the community around it. Steps to understand the basic concepts of CSR are: (1) planning, (2) determining the type of planning, (3) making planning the basis of the transformation process, (4) CSR strategy development approach, (5) choosing a planning model, (6) social mapping economics, (7) implementation of the principles of the CSR method. Assessment of corporate governance can be seen in table 3.

Observation result:

Table 3 GCG Observation Results from 2017 to 2020

No	Company Name	2017	2018	2019	2020	Category
01	Garuda Indonesia	92.76	93.85	80.01	86.83	Very Reliable
02	Indo Farma	81.19	81.62	83.99	81.80	Trusted
03	Waskita Karya	88.24	87.67	88.25	88.88	Very Reliable
04	Semen Indonesia	92.45	93.40	94.54	95.08	Very Reliable
05	Wijaya Karya	94.93	94.92	94.95	94.96	Very Reliable
06	Phapros	79.48	86.72	90.09	91.01	Very Reliable
07	Adhi Karya	81.63	86.90	84.87	92.96	Very Reliable
08	Jasa Marga	98.86	97.82	98.06	98.00	Very Reliable
09	Kereta Api Indonesia	98.33	90.03	90.22	90.46	Very Reliable
10	Waskita Beton	78.19	78.15	89.14	82.25	Trusted
11	Indosat	80.93	83.28	83.58	83.92	Trusted
12	Jasa Raharja	96.13	96.13	96.31	96.50	Very Reliable
13	Pertamina	88.52	84.52	92.65	92.85	Very Reliable
14	Bank Rakyat Indoensia	88.48	89.06	90.75	93.25	Very Reliable

15	Kimia Farma	84.52	91.82	93.09	94.76	Very Reliable
16	Damri	85.12	85.50	89.10	89.40	Very Reliable
17	Pindad	84.03	86.19	86.46	86.13	Very Reliable
18	Antam	88.81	90.11	98.28	98.34	Very Reliable
19	BNI 46	88.94	88.38	89.74	90.74	Very Reliable
20	Telekom	84.09	93.00	93.27	93.91	Very Reliable
21	Mega Eltra	76.04	79.26	82.10	82.17	Trusted
22	Bank Mandiri	103.09	93.86	94.86	95.01	Very Reliable
23	Wahana Natural	81.39	83.72	85.55	87.22	Very Reliable
24	Unilever	93.20	100.17	103.94	106.60	Very Reliable
25	Maritim	83.06	91.81	93.50	94.50	Very Reliable
26	Bio Farma	87.03	90.53	90.93	91.19	Very Reliable
27	Hutama Karya	81.19	86.56	84.71	N/A	Trusted
28	Timah	90.35	91.49	90.02	92.98	Very Reliable
29	BJB	80.27	91.89	96.07	86.32	Very Reliable
30	Nindia Karya	85.51	89.64	89.69	96.79	Very Reliable
31	Pupuk Indonesia	88.79	91.74	88.97	93.90	Very Reliable
32	PTP II	85.21	86.14	82.16	88.67	Very Reliable
33	Bukit Asam	90.88	91.12	97.50	96.10	Very Reliable
34	Gudang Garam	N/A	80.43	92.29	80.89	Trusted
35	Blue Bird	83.05	91.31	93.50	94.56	Very Reliable
36	Rekayasa Industri	81.69	84.24	83.72	88.92	Very Reliable
37	Petrokimia Gresik	92.17	93.58	91.86	93.53	Very Reliable
38	Sarinah	88.50	81.04	85.02	89.02	Very Reliable
39	Indonesia Power	93.07	93.44	93.51	80.54	Trusted
40	Jaminan Kridit Ind	92.40	95.70	95.80	96.80	Very Reliable
41	P Maritim dan Logistik Indoesia	83.06	91.81	93.50	94.50	Very Reliable
42	Jasa Armada Indonesia	86.20	90.89	95.23	96.97	Very Reliable
43	Perum Bulog	89.77	89.77	88.97	N/A	Very Reliable
44	Karakatau Steel	82.88	87.89	90.34	91.60	Very Reliable
45	Pupuk Iskandarmuda	82.27	85.26	84.87	87.53	Very Reliable
46	Sinergi Jaya Prima	92.45	93.40	94.54	N/A	Very Reliable
47	Adira	80.36	88.90	86.95	89.50	Very Reliable
48	Pal Indonesia	N/A	75.14	75.16	80.40	Very Reliable
49	Pindad	84.04	86.91	86.47	86.13	Very Reliable
50	Timah	90.35	91.30	90.00	92.97	Very Reliable
51	Semen Gresik	92.45	93.40	79.88	87.56	Very Reliable
52	Mitra Karya	61.57	69.92	69.92	70.21	Trusted

Source: <http://www.idx.co.id> and various course from the company's website

Of the 52 companies studied on the implementation of Corporate Governance, there are 8 companies with a trusted category, namely 15.38%, the difference is 44 companies with a very trusted category, which is 84.62%.

Table 4 Observations of Corporate Social Responsibility 16 Brand Doing CSR Successfully, by digital marketing Institute:

No	Company Name
1	Johnson and Johnson
2	Google
3	Coca cola
4	Ford Motor Company
5	Netflix
6	Spotify
7	Pfizer
8	Wells Farga
9	Toms
10	Bosh
11	General Electric (GE)
12	Starbucks
13	New Belgium Brewing Company
14	The Walt Disney Company
15	Lego
16	The Wasington Post and Tik Tok

Source: <https://digitalmarketinginstitute.com/blog/corporate-16-brands-doing-corporate-social-responsibility-successfully>

Corporate social responsibility comes in many forms. Even the smallest company can impact social change by making a simple donation to a local food bank. Some of the most common examples of CSR include:

- Reducing carbon footprints
- Improving labour policies
- Participating in fair trade
- Diversity, equity and inclusion
- Charitable global giving
- Community and virtual volunteering
- Corporate policies that benefit the environment
- Socially and environmentally conscious investments

5. Conclusion

Management in carrying out the business processes of an entity must be ethical and professional and have good integrity and strive to fulfill all the interests of stakeholders including shareholders.

The Financial Services Authority (OJK) issued the Financial Services Authority Regulation (POJK) Number 210/POJK.01/2015 concerning the Implementation of the Guidelines for Good Corporate Governance and the Circular Letter of the Financial Services Authority (SEOJK) Number 32/SEOJK.01/2015 concerning Governance Guidelines Public Company related to the implementation of Good Corporate Governance, namely Public Company Governance consists of five aspects:

1. Public Company Relations with Shareholders in Ensuring Shareholders' Rights;
2. Functions and Roles of the Board of Commissioners;
3. Functions and Roles of the Board of Directors;
4. Stakeholder Participation;
5. Information Disclosure.

It is hoped that the application of these new principles can make it easier for market players to adapt the implementation of the principles of Good Corporate Governance to the changes and business growth to date, to encourage the growth and sustainability of all real sectors in Indonesia, so as to encourage resilience and economic growth under normal or normal conditions. crisis.

Good governance system The National Committee refers to the principles published by the Organization for Economic Co-operation and Development (OECD).

Companies should be able to optimize CSR programs by:

1. Improve understanding of the basic concepts of CSR;
2. Understand the flow of CSR methods;
3. Implementing CSR methods;
4. Establish a collaborative institution;
5. Assisting, monitoring, and evaluating CSR programs.

By understanding these two things, namely good governance and carrying out social and environmental responsibilities appropriately, it is hoped that the company will grow and be sustainable in its business processes so that it has value in society.

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RSPO audit toward audit based on divinity values, is it true?

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ABSTRACT

Purpose — *The Roundtable on Sustainable Palm Oil (RSPO) is a global standard for oil palm plantations to demonstrate an environmentally friendly production process. The RSPO audit aims to save the environment by not reducing the economic benefits of oil palm plantations. Along with the increasing awareness of divinity in modern society, especially in Indonesia, it is able to generate ideas related to divinity-based audits. A divinity-based audit can also be referred to as a verification process, periodic validation by prioritizing divine values, independently, objectively to increase adherence to divine values, especially in Islam.*

Design/methodology/approach — *the method used in this article is to conduct interviews and focus group discussions with stakeholders related to the RSPO audit, conduct analysis through the RSPO website supported by the latest literature.*

Findings — *the article shows the results that many items verified in the RSPO audit are divine values contained in the Koran. These values include environmental damage in accordance with Q.S Ar-Rum 42 which means: “Damage has appeared on land and at sea caused by the actions of human hands; Allah wants them to feel some of the (results of) their actions, so that they return (to the right path). The use of chemical fertilizers without supervision in plantations, is inversely proportional to the environmental conditions damaged by the use of chemical fertilizers. Saving human life due to the low management of plantations, especially community-based plantations, so that it is feared that it will have bad consequences in the future.*

Practical implications — *After the RSPO audit is carried out, Europe will buy palm oil products as the RSPO pioneer country, so it is feared that they will carry out very tight price controls on palm oil products and a trade war with China. It takes a serious effort from the government to have the power to control the price of palm oil products. Thus, the RSPO audit is indicated as the seed of a new form of capitalism in an effort to control oil palm products to meet European needs and win the trade war with China so that this is contrary to a divine-based audit.*

Originality/value — *the article conducts interviews and focus group discussions with stakeholders such as oil palm cooperatives, RSPO consultants and RSPO auditors.*

Keywords — *RSPO, audit and divinity.*

Introduction

Indonesia is a country with the largest plantations throughout the world. Based on the Ministry of Agriculture that Indonesia's palm oil plantation areas cover approximately 5.98 million hectares as of 2021. As a matter of fact, provinces with recent significant increase of palm plantation numbers are Central Kalimantan, Gorontalo, West Kalimantan and Papua. Whereas, provinces with largest palm oil plantation areas are Riau, Central Kalimantan, West Kalimantan, North Sumatra and East Kalimantan (*Badan Pusat Statistik, 2022*)—Central Bureau of Statistics, 2022. The increase of palm oil plantation areas allow growing oil-contained fresh palm oil bunches. Thus, environmental sustainability becomes critical issue. Forest conversion into palm oil areas enables biodiversity loss, disturbed ecosystem balance, increased greenhouse gas emissions, and even social conflicts among communities around plantations (Lenzen et al., 2012). in Southeast Asia, forest conversion to palm oil plantations has resulted around 75% bird and butterflies species loss, bee population shifts, and other flora and fauna shifts which eventually disrupt ecosystem balance (Giam et al., 2015; Miettinen et al., 2012; Page et al., 2011; Wilcove et al., 2013). Hence, RSPO (Roundtable on Sustainable Palm Oil) has appeared to deal with this concern.

RSPO is a non-profit organization which unites stakeholders of palm oil industry's seven (7) sectors such as palm oil producers, manufacturers, traders, consumers, retailers, banks/investors, and environmental and social non-governmental organizations (NGOs) to develop and implement global standards of palm oil sustainability (RSPO, 2022). The RSPO has developed sets of environmental and social criteria for companies to produce Certified Sustainable Palm Oil (CSPO). During proper implementation, it will likely minimize negative impacts of palm oil cultivation on environment and communities around palm oil areas.

As a matter of fact, palm oil is vegetable oil commodity with the highest trade volume throughout world and represents approximately 27% of the world oil crops market (FAOSTAT, 2022). As a matter of fact, the world has indicated reasonably high dependence on palm oil so that sustainable mechanism of managing and producing palm oil is required especially in the guidance people, planet and profit (3P). In addition, Triple Bottom Line (TBL) is a sustainable business concept which bases the value of a company's success on three criteria such as People (Social), Planet (Environment), and Profit (Economy) (Elkington, 2012, 2013, 2018). Furthermore, the TBL concept emphasizes profit as not only company's meticulous attention in business, but also their contribution to society (humans) as well as their crucial role for environmental protection (planet).

Nevertheless, TBL Elkington is considered a partial concept to save environment. Thus, Triyunowono has offered a new and broader concept called the Pentuple Bottom Line (PBL) which focuses not only on business profit, planet and people, but also on prophet and God. The Pentuple Bottom Line (PBL) concept, basically stimulates the highest mankind's moral conscience to unite with God (Triyuwono, 2016). In addition, Sukoharsono (2019) carried out further attempts called the Pentuple Bottom Line (PBL) used for comprehensive disclosure of sustainable reporting by either large or small business or public organizations. The concept of PBL comprises Planet, People, Profit, Phenotechnology, and Prophet.

Planet refers to natural environment preservation as organizations' operational contribution to attempt environmental balance. Whereas, People refers to society's welfare (internal and external part of the organization) which make crucial contributions towards the corporation. Justice and welfare proportion for people should be balanced in efforts. Profit is an effort that is now dominant in achieving organizational performance that must be balanced. Profit and welfare are such important aspects to be balanced with other concepts. Phenotechnology refers to information technology which apparently becomes an important part of corporation survival. The prophet refers to spiritual and mental balance throughout the process of organizational preservation (Sukoharsono, 2019).

Based on those facts, this article examines RSPO audit conducted for the sake of palm oil plantation environmental sustainability by certification awarding to 7 sectors of the palm oil industry. Certification systems for sustainable agricultural commodities normally rely on auditors to verify producers' compliance with environmental, social, and legal standards (Bishop & Carlson, 2022). In the palm oil industry, the Roundtable on Sustainable Palm Oil (RSPO) certification system convinced to deal with core sectoral sustainability issues, including deforestation, fires, biodiversity loss, drained peatland, forced labor, and land tenure conflicts through third-party audit implementation of large-scale palm oil farmer, cooperative organizations and non-governmental organizations with specific criteria.

Methods

This research was conducted in Rokan Hulu Regency, Indragiri Hulu Regency, Riau Province with stakeholders of RSPO audit for CSPO certification including cooperative management, PTPN V and RSPO consultants. We also required to conduct literature study on RSPO policies. The study employed informants to provide information about the object's condition as well as situation. The informants were listed by research team based on their potential capabilities and comprehension of palm oil plantation's conditions and situation in the target area. As a matter of fact, the informants were apparently companies' staff or individuals who involved in the palm oil plantation management as well as RSPO

consultants assisting auditees for RSPO audits. The study used descriptive analysis after data collection to assure systematic, factual, and accurate data and facts as well as relationships among investigated phenomena.

Result and Discussion

RSPO audit toward audit based on divinity values.

This research aims to achieve divine-valued information in relation to RSPO certification with ultimate goals of environment friendly and sustainable development. The selected informants are independent oil palm farmers in the cooperative category, yet, unclassified as non-plasma farmers. Independent farmers, especially prior to their education, audit, and certification process will be put in group of oil palm plantations with the minimum requirement of 50 hectares total area. As a matter of fact, the certification system comprises three phases to assess farmers' compliance and claims which will be of great benefits to farmers. [1] In each phase, members' compliance with respective indicator is assessed during field audits by accredited Certification Bodies, [2] Claims refer to fresh Fruit bunches (FFB; oil palm) status as certified oil crude palm or CPO/PKO as well as marketable as certified oil through any supply networks, including through smallholder credit or regular trade (in Milestone B), and [3] Benefits refer to incentives achieved through certified FFB sale as RSPO Credit or through a regular supply chain (Identity Preserved - IP, Segregated - SG, or Mass Balance - MB). Buyers can purchase certified oil from farmers with external communication.

The RSPO principles refer to Impact Goal as what follows 1: Prosperity: Competitive, resilient and sustainable sector comprises 3 principles such as: [1] Behave ethically and transparently, [2] Operate legally and respect right, [3] Optimise productivity, efficiency, positive impacts and resilience. Such a principle aims to prevent environment from any damage as Islam categorizes business as not only activity to satisfy mankind's needs (al-Syahwat) but also, more importantly, to search for life balance (Darmawati, 2017). Furthermore, Islam also deals with ethical behavior especially the practice of mal-business which provides negative impacts on environment, and not to mention, on law-breaking which enables others' losses. Religion comes to protect, maintain and care for life, thoughts, characters as well as to struggle for equality and freedom. As a matter of fact, protecting and preserving the environment is the main goal of human and environmental relations (Harahap, 2015). This complies with the principle of legal operation and proper respect which is obviously reinforced by informant's statement about life balance of humans and the environment for environmental sustainability. Moreover, the Qur'an reaffirmed ethical behavior in the environment as: "And, do not do mischief on the earth, after it has been set in order, and invoke Him with fear and hope; surely, Allah's the Mercy is (ever) near unto the good doers." (Q.S Al-A'raf: 56).

Impact goal 2: People: Sustainable livelihoods and poverty reduction consists of 3 principles, such as [1] Respect community and human rights and deliver benefits, [2] Support smallholder inclusion, [3] Respect workers' rights and conditions. On this second principle, the informant confirmed supports for human rights by avoiding children and women exploitation. Mankind is considered as God's caliphs (representative) on earth, awarded with blessing, glory, and dignity that must be respected and protected. Among the verses of the Qur'an that show this is Q.S. Al-Isra': 70 saying "And indeed We have honored the children of Adam...". It implies that by default (naturally), humans have nobility (karamah) and, thus, this honor must be protected (Abdillah, 2014). In an Islamic perspective, the concept of human rights is explained through the concept of maqâshid al-syari'ah (sharia goals), which has been formulated by past scholars. Shari'ah (maqâshid al-syari'ah) is aimed to realize (mashlahah) mankind's benefits by protecting their necessities (dharûriyyât) and achieving their needs (hâjiyyât), decorations (tahsiniyyât)" (Nugraha et al., 2020). The maqâshid al-syari'ah theory covers the protection of five things (aldharûriyyât al-khamsah), as follows: (1) protection of religion (hifzh al-din), also refers to rights in religion, (2) protection of the soul (hifzh alnafs), also refers to the right of life and security, (3) protection of reason (hifzh al-'aql), also refers to the right in education, (4) protection of property (hafizh al-mal), also refers to property acquisition, proper life and

work, (5) protection of descendants (hifzh al-nasl), also refers to the right to marry and have offspring. Human glory (karamah insâniyyah) is represented in such five things protection. Shari'ah (maqâshid al-shari'ah) is reinforced by the principles of Islamic law which include 'adl (justice), rahmah (compassion), and wisdom (wisdom) both in relation to Allah, with fellow human beings and with others, the nature.

Impact goal 3: Planet: Conserved, protected and enhanced ecosystems that provide for the next generation owns only 1 principle called: Protect, conserve and enhance ecosystems and the environment. The informant claimed that RSPO audit was conducted to prevent the environment from damage, especially oil palm plantations. The guidelines applied to fulfill 3 impact goals and 7 principles are Economic Indicators consisting of Production and sales, Yield (Land Productivity), Social Indicators consisting of Labor, Training, Inclusion of smallholders and outgrowers, Lost Time Injury Frequency Rate (LTIFR) and Complaints and Grievances, Environmental Indicators consist of Pesticide use, Freshwater usage by mill and Biodiversity. According to the teaching of Islam, the environment where humans and all creatures live, is God's creation set in balance, proportional with measurements and tangibilities of quality and quantity. Planet the earth is a place where humans and all elements of life live with a great diversity, process and function. God created various elements which make up nature to meet human needs, as well as evidence of God as the Almighty, Creator, and Sustainer of nature. Nature is an entity or reality (empirical) that does not stand alone, but is related to humans and to the supernatural and supra-empirical reality. Moreover, according to Islam environment refers to all human activities in relation to time and space.

The environment of space includes the earth, water, animals and plants as well as all creatures above and inside the earth, as created by God the Almighty for the benefits of mankind to support their needs in life. As caliphs, humans are given the responsibility of managing the universe for the welfare of mankind, because the universe was created by God for humans. The Caliph refers to interaction of human to human and human nature. Furthermore, the Caliph also refers to protection, maintenance, and guidance, so that creature will eventually achieve their own life. The values include environmental damage as stated in Q.S Ar-Rum 42 which means: "There has been damage on land and at sea due to actions of human hands; Allah wants them to feel some of (the consequences of) their actions, so that they return (to the right path). The use of chemical fertilizers without supervision in plantations is inversely proportional to the environmental conditions damaged. Saving human life due to poor management of community-based plantations will likely enable upcoming bad impacts.

RSPO for Environmental reservation or Environmental Acquisition?

The RSPO certification is required due to negative issues towards Indonesian CPO and, in addition, to facilitate companies to open palm oil access throughout European markets. The RSPO certificate is voluntary for its members. In fact, the role of RSPO audits in generating incremental output across key sustainability issues remains unclear (Bishop & Carlson, 2022). After the audit, non-compliance reoccurred, as Bishop & Carlson (2022) claimed that non-compliances such as by Aste & Pollution (9% of all noncompliances) and Employment (7%) and the least changes in Fire (<1%) and Corporate Social Responsibility programs (<1%). The palm oil industry competes to achieve RSPO certification even though non-compliance with RSPO principles remains and even indicated increase afterwards.

This is line with Johnson's (2014) research stating that Ecuador also deals with RSPO with the aim of improving collaborative management which involve large companies Johnson (2014) isms that only "greened" businesses that were already "shady". The RSPO is referred to "green acquisition" dealing with capitalist to hold and control oil palm plantations in Ecuador (Johnson, 2014). Such a capitalism aims to dominate the palm oil industry for high profits (Maher, 2015).

Hoever, Schleifer (2016) argues that the RSPO has been terminated by growing markets of global economic power; existing private governance institutions are not equipped to address large-scale deforestation and biodiversity loss. The challenge of RSPO certification is quite high, especially in meeting the demands of India and China. Market

demand for the palm oil industry, especially China, requires sustainability schemes monitor so that high demand will unlikely damage RSPO orders for environmental preservation (Higgins & Richards, 2019). After RSPO audit, Europe—as pioneer countries of RSPO—was concerned about palm product purchase. Thus, they would carry out price controls on palm products and a trade war with China. It takes a serious effort from the government to have the power to control the price of palm oil products. Hence, the RSPO audit is indicated as a new form of capitalism to control oil palm products to meet European needs and win over China in a business war although is contrary to divine-based audits.

Conclusion

The first impact goal untuk Prosperity: Competitive, resilient and sustainable sector, a principle aims to prevent environment from any damage as Islam categorizes business as not only activity to satisfy mankind's needs but also, more importantly, to search for life balance. The second impact goal for People: Sustainable livelihoods and poverty reduction, on this second principles, mankind is considered as God's caliphs (representative) on earth, awarded with blessing, glory, and dignity that must be respected and protected. The last impact goal for Planet: Conserved, protected and enhanced ecosystems that provide for the next generation, according to the teaching of Islam, the environment where humans and all creatures live, is God's creation set in balance, proportional with measurements and tangibilities of quality and quantity. Planet the earth is a place where humans and all elements of life live with a great diversity, process and function. Planet the earth is a place where humans and all elements of life live with a great diversity, process and function. God created various elements which make up nature to meet human needs, as well as evidence of God as the Almighty, Creator, and Sustainer of nature.

In fact, the role of RSPO audits in generating incremental output across key sustainability issues remains unclear. After the implementation of the RSPO audit, non-compliance occurred again. After RSPO audit, Europe—as pioneer countries of RSPO—was concerned about palm product purchase. Thus, they would carry out price controls on palm products and a trade war with China. It takes a serious effort from the government to have the power to control the price of palm oil products. Hence, the RSPO audit is indicated as a new form of capitalism to control oil palm products to meet European needs and win over China in a business war although is contrary to divine-based audits.

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SIPEDAL AS A SUSTAINABILITY STIMULUS ON LPD

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1. Introduction

The Village Credit Institution (LPD) is one of the micro credit institutions that is established in each traditional village in Bali. LPDs were first established in 1984 with a total of 8 LPDs, which then increased in number until in 2021 there were 1437 LPDs throughout Bali. LPDs have the potential to help the central government to distribute income through the provision of savings and loan services that are easily accessible to the public. On the other hand, the development of the number of LPDs is not supported by good management. This can be seen from the occurrence of various cases in the LPD, for example from 50 corruption cases that occurred in Bali 11 cases of which occurred in the LPD (www.radarbali.jawapos.com). The high number of cases that occur causes the need for policies from each LPD related to the internal control function to reduce the risk of corruption, abuse of authority, administrative errors and the occurrence of bad loans.

Village regulations and policies (*awig-awig* and *perarem desa*) have a strategic role in protecting LPDs from sustainability risks. Each type of business certainly has its own risks, where LPD has an inherent risk in the form of bad loans, but this inherent risk can be reduced by internal supervision and an ethical and obedient attitude to their leaders. LPD as a cultural entity remains within the scope of financial inclusion to reduce poverty, eradicate debt bondage, and provide access to capital for small businesses. This financial inclusion is directly or indirectly a buffer for Balinese customs and culture inspired by Hinduism, so that it is not an exaggeration for LPD in the future to become a Hindu economic sub-system of the Hindu economic and financial system holistically.

Internally, the LPD is supervised by the Supervisory Board, where the Head of the Supervisory Board is the Village Head in the village. The head of the supervisor is assisted by a member of the supervisor whose personnel are selected by the villagers (*krama*) of the village. The LPD supervisory body also has a function as an internal auditor for 2 LPDs whose job is to oversee the implementation of LPD policies and business management (Hermawan and Sudiartana, 2015). The role of the LPD supervisory body is very strategic, in addition to being an internal auditor, the supervisory body also acts as an effective partner for the progress of the LPD (Wedayani and Jati, 2012). Therefore, the performance of the LPD supervisory body must be considered, because it will affect the performance of the LPD. The importance of the role of the Supervisory Board in supervising LPDs is not matched by the competence and access to information needed to carry out maximum supervision. The supervisory body has limited access to information because the supervisory body is not involved in the operational activities of the LPD. According to Suartana (2009: 19) the role of the internal supervisory body is to actively oversee policies, operations and accounting and financial reporting practices and be a liaison between managers and external auditors when necessary.

This study develops an accounting information system to address the information gap between LPD managers and supervisory bodies. The developed accounting information system, SIPEDAL, aims to provide significant information that requires approval from the Supervisory Agency to prevent misuse and errors. The information received is in the form of unsecured credit applications, large loan applications, deposit disbursement, and daily

LPD transaction reports. Based on this explanation, the purpose of this study is to determine the extent to which the effectiveness of the Accounting Information System affects the performance and satisfaction of the supervisory agency, as well as the ability of job satisfaction to mediate the effect of AIS on the performance of the LPD supervisory body.

Literature Review

Agency Theory

Agency theory is the theoretical basis that underlies the company's business practices that have been used so far. The theory is rooted in the synergy of economic theory, decision theory, sociology, and organizational theory. This research on the audit committee and sharia supervisory board is based on agency theory. Agency theory is the basis used by companies to understand corporate governance. What is discussed in this theory is the relationship between owners and shareholders (principal) and management (agent). Jensen and Meckling, (1976) in this case state that the agency relationship is a contract between one or more people (principal) who employs another person (agent) to provide a service and then delegates decision-making authority to the agent.

The concept of agency theory according to Anthony and Govindarajan, (1995) is a relationship or contract between the principal and agent. The principal employs the agent to perform tasks for the benefit of the principal, including the delegation of decision-making authority from the principal to the agent. According to agency theory, the separation between ownership and management of the company can lead to conflict. The occurrence of a conflict called agency conflict is caused by the related parties, namely the principal (who gives the contract or shareholder) and the agent (who receives the contract and manages the principal's funds) have conflicting interests (Destika, 2011; 12) Agency theory assumes that all individuals act in their own interests. Shareholders as principals are assumed to be only interested in increasing financial results or their investment in the company. While the agents are assumed to receive satisfaction in the form of financial compensation and the conditions that accompany the relationship.

Effectiveness

Handoko (2003: 7) explains effectiveness is the ability to choose the right goals or the right equipment to achieve the goals that have been set, concerning how to do the right job. According to Tunggal (2004: 12), effectiveness is the determination of the company's goals that have been set have been achieved. Effectiveness is viewed in terms of quality or in terms of quantity of work results and the targeted time limit. According to Jackson (1995) in Sulistyowati (2004: 10), effectiveness is one of the performance indicators for the implementation of a performance, which informs how much is the achievement of the targets set. According to Komarudin (2001) in Megawati (2009: 30), effectiveness is a condition that shows management activities in achieving the goals set. Meanwhile, according to Yamit (1998) in Sari (2009: 52), effectiveness as a measure that provides an overview of how far the target can be achieved, both in quality and time, the orientation is on the output produced. Based on this understanding, it can be concluded that effectiveness is a condition that states success in carrying out an activity or effectiveness in order to achieve the goals that have been set.

Hypothesis Development

The use of accounting information systems initially used information technology which required all employees to carry out activities in accordance with predetermined goals. The results of Christianto, et al. (2007) show that the implementation of information systems has an impact on labor productivity. Darmini and Putra (2008) show that the use of information technology and trust in the new information system has a positive and significant effect on individual performance at BPR in Tabanan Regency. The effectiveness

of an accounting information system is a description of the extent to which the target is achieved from a set of resources that are arranged to collect, process, and store electronic data, then turn it into useful information and provide the required formal reports both in terms of quality and time (Damayanthi, 2012). Dewi and Dharmadiaksa (2017) found that the effectiveness of accounting information systems has a positive effect on performance.

Thompson et al. (1991) states that optimizing information technology can be done by improving the performance of its users, but it does not mean that every individual positively accepts the existence of the technology and can feel the benefits. Novita (2011) found that the more effective the accounting information system, the higher the individual's performance. Each characteristic of the information produced by a system is not always the same. User satisfaction is usually influenced by timely information, accurate information, information that meets needs, and relevant information and meets criteria related to the quality of information system output. The success of a company's information system depends on how the system is run, the ease of the system for its users, and utilization of the technology used (Goodhue, 1995). Myers, et. al. (1997) stated that service quality as well as system quality and information quality have an influence on user satisfaction. The measure of user satisfaction is also measured on a computer system which is reflected by the quality of the system owned by Guimaraes., et al (1992).

Based on the explanation above, the hypotheses proposed in this study are:

- H1: The effectiveness of the SIPEDAL accountant information system has a positive effect on the performance of the LPD Supervisory Board.
- H2: The effectiveness of the SIPEDAL accounting information system has a positive effect on job satisfaction of the LPD Supervisory Board
- H3: Job Satisfaction has a positive effect on the performance of the supervisory body
- H4: Job satisfaction mediates the effect of the effectiveness of the SIPEDAL accounting information system on the performance of the supervisory body.

2 Research Method

This research was conducted at Padang Luwih LPD located in Badung, Bali. This LPD was chosen because the Padang Luwih LPD is an LPD that has implemented the SIPEDAL accounting information system. The object of research is the effect of the effectiveness of the SIPEDAL accounting information system on the performance of the LPD Supervisory Board. The population in this study were all employees, managers, and supervisory bodies of LPD. This study used the entire population as a sample, as many as 31 people.

The variable effectiveness of the accounting information system was measured using questions adopted from Apriadi's research (2021). Job satisfaction variables were measured using a questionnaire adopted from Sari (2013) which was improved according to research needs. The performance variable of the LPD supervisory body is measured by a questionnaire adopted from the research of Kusuma and Werastuti (2020). The hypothesis in this study was tested using SEM-PLS.

3. Discussion

Table 1

Variable Relationship	T statistics	P Values	Results
SIA Effectiveness -> Job Satisfaction	3.583	0.000	Received
SIA Effectiveness -> Supervisory Body Performance	2,542	0.006	Received
Job Satisfaction -> Supervisory Body Performance	2,129	0.038	Received
SIA Effectiveness -> Job Satisfaction -> Supervisory Body Performance	2.426	0.004	Received

Source: Processed Data (2022)

The results of the analysis show that the effect of the effectiveness of AIS on job satisfaction has a t-statistic value of 3.583 with a significance value of 0.000, so it is stated that the effectiveness of AIS has a positive and significant effect on job satisfaction.

The results of the analysis show that the effect of the effectiveness of AIS on the performance of the supervisory agency has a t-statistic value of 2,542 with a significance value of 0.006, so it is stated that the effectiveness of the AIS has a positive and significant effect on the performance of the supervisory agency.

The results of the analysis show that the effect of job satisfaction on the performance of the supervisory body has a t-statistic value of 2.129 with a significance value of 0.038, so it is stated that job satisfaction has a positive and significant effect on the performance of the supervisory body.

The results of the analysis show that the effectiveness of AIS has an effect on the performance of the supervisory body with job satisfaction as a mediating variable having a t-statistic value of 2,426 with a significance value of 0.004, where the mediating nature of job satisfaction is partial mediation. so that it is stated that job satisfaction is able to partially mediate the effect of the effectiveness of AIS on the performance of the supervisory body.

3.1 The Effect of SIA's Effectiveness on the Performance of the Supervisory Body

Based on the results of the analysis, the effectiveness of SIA has a positive effect on the performance of the LPD supervisory body. These results explain that when the application of the SIPEDAL accounting information system at LPD Padang Luwih is more effective, it will improve the performance of the LPD supervisory body. SIPEDAL is an information system that connects the operational activities of the LPD to the supervisory agency, where the supervisory body will receive information and confirmation related to transactions that occur in the LPD such as loans without collateral, large loans and withdrawals of deposits. The existence of an information system that provides information in real time to the supervisor will facilitate the supervision carried out, which will ultimately improve the performance of the supervisory body.

This study supports the research of Dewi and Dharmadiaksa (2017) which explains that the effectiveness of accounting information systems in companies is not only to increase efficiency, but also to support more effective performance processes. A similar opinion was also found by Utari (2012) and Suratni., et al (2015) who explained that the effectiveness of accounting information systems had a positive effect on performance.

3.2 The Effect of AIS Effectiveness on Job Satisfaction of the Supervisory Board

Based on the results of the analysis, the effectiveness of SIA has a positive effect on job satisfaction of the LPD supervisory body. This shows that when the accounting information system in the company can be implemented effectively, it will increase the job satisfaction of the Supervisory Board. The existence of SIPEDAL which is applied as an information system that can be accessed through the devices of each administrator and supervisor will be able to provide convenience to supervise LPD operational activities. The convenience obtained through the information system will increase the satisfaction of the supervisory body, because the supervisory body does not need to come directly to the LPD to check financial reports and operational activities. This is in accordance with Guimaraes., et al (1992) which stated that the job satisfaction of system users will depend on the quality and effectiveness of the system.

3.3 The Effect of Job Satisfaction on the Performance of the LPD Supervisory Board

Based on the results of the analysis, job satisfaction has a positive effect on the performance of the supervisory body. This explains that the higher the job satisfaction of

the LPD supervisory body, the higher the performance of the supervisory body. Job satisfaction is a feeling associated with employees related to their work and conditions. When the supervisory body is satisfied with the work environment and the facilities and infrastructure to support its work, it will help improve the performance of the supervisory body. The results of this study support the research by Steven and Prasetyo (2020) which found that job satisfaction has a positive effect on employee performance.

3.4 Role of Job Satisfaction in Mediating the Effect of AIS Effectiveness on LPD Supervisory Body Performance

Based on the results of the analysis, job satisfaction mediates the effect of the effectiveness of the AIS on the performance of the LPD supervisory body. Job satisfaction is an affective or emotional response to various aspects or aspects of one's work so that job satisfaction is not a single concept. A person can be relatively satisfied with one aspect of the job and dissatisfied with one or more other aspects. Edison et al. (2016:216) argues that the factors that influence job satisfaction are the salary earned, the work itself, promotion opportunities, working conditions, co-workers and job security within the organization. In this study, job satisfaction can be caused by the availability of information systems that support the work of all LPD components. SIPEDAL as an accounting information system at LPD Padang Luwih provides convenience for the supervisory body in carrying out its work by obtaining information and reports related to LPD activities. This will make it easier for the supervisory body to communicate with LPD management and employees related to transactions that occur in the LPD, besides that the supervisory body will be able to make decisions quickly and precisely because it can be done from anywhere through the information provided in real time. So it can be concluded that the satisfaction caused by the effectiveness of the accounting information system will be able to improve the performance of the LPD supervisory body. This will make it easier for the supervisory body to communicate with LPD management and employees related to transactions that occur in the LPD, besides that the supervisory body will be able to make decisions quickly and precisely because it can be done from anywhere through the information provided in real time. So it can be concluded that the satisfaction caused by the effectiveness of the accounting information system will be able to improve the performance of the LPD supervisory body.

4. Conclusions

This study found that the effectiveness of AIS and job satisfaction have a positive effect on the performance of the regulatory body. In addition, this study found that job satisfaction mediates the effect of the effectiveness of AIS on the performance of the LPD supervisory body. This study has limitations because the information system has only been tested on one LPD, so the number of samples is limited. This provides an opportunity for researchers and future researchers to develop SIPEDAL in different LPDs and then test the consistency of the results. The implication given by this research is that the supervisory body is an integral part of the LPD, which must receive information that is balanced with the information held by the management and employees of the LPD.

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SPATIAL MODELING OF LAND USE CHANGES IN THE NORTH COASTAL CITY OF SURABAYA

By

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Abstract

The North Coast of Surabaya City has a dynamic development which is the result of the driving and inhibiting factors of the city's development. The driving factor that has a high significance for the development of the north coast of the city of Surabaya is the activity of Teluk Lamong Harbor, good accessibility to the city center. Based on this, this study aims to predict changes in land use in the North Coast of Surabaya City based on the perspective of a balance point formed from the driving factors (economic driving factors) and inhibiting factors (ecological factors).

The analytical method used is Markov-cellular automata is a type of artificial intelligence based on iteration calculations on raster data. The iteration is carried out on raster data on the probability of land use change which is formulated from the multi-factors driving land use change and inhibiting land use change. The number of pixels that became the reference in the iteration process was analyzed using Markov analysis. In formulating the probability map of land use change, logistic regression methods and artificial neural networks are used.

The research results are expected to be divided into four analysis outputs, the first point is the prediction of the distribution of tidal inundation in the next 20 years. The results of the analysis at this stage will be used in the analysis of the probability map of land use change as an inhibiting factor for land use change. The second point is to identify the factors that influence land use change. Factor identification was performed using v-cramer's analysis which was used as the basis for cluster and cellular automata analysis. The third point of this research is the output of cluster analysis based on the sub-region's response to the factors that influence the development of the city. The analysis was carried out on raster data using Raster Multidimensional Scaling analysis so as to be able to produce cluster analysis that was able to explain urban phenomena spatially. The fourth point in this study is to formulate a spatial model of land use change that is able to accommodate the response of spatial patterns to the balance point resulting from factors and trajectory able to explain the pattern formed from each response change in the same area.

Keywords: Markov, Cellular Automata, Land Use Change, Land Use

1.1 Background

The North Coast of Surabaya City has a dynamic and heterogeneous regional development. This heterogeneity and dynamics is the implication of the different characteristics of urban sub-areas that are different both in terms of thematic development, urban functions and differences in the factors driving and inhibiting urban development. Some areas have indications of stagnation due to the influence of sea tides which result in a decrease in land value. For areas that have good adaptation to disaster factors, they have a faster and more massive development acceleration when compared to areas that do not have sufficient capacity to respond to tides.

The driving factors that have a high significance for the development of the north coast of Surabaya City are the activities of Teluk Lamong Harbor, good accessibility to the city center and differences in the hierarchy and function of the bordering area. Each urban characteristic and land use class type has a different response to these factors which are the result of the equilibrium point from the economic aspect which is the result of the driving factors and the ecological aspect as the limiting factor. Based on this, this study aims to predict changes in land use in the North Coast of Surabaya City based on the perspective of a balance point formed from the driving factors (economic driving factors) and inhibiting factors (ecological factors).

The results of the research are expected to formulate a spatial model of land use change that is able to accommodate the response of spatial patterns to the balance point resulting from factors and trajectory able to explain the pattern formed from each response change in the same area. Based on this, this research will predict land use that accommodates the above factors in order to determine the size, spatial, temporal and visualization to formulate sustainable planning.

1.2 Research purposes

This study is intended to model the trend of land use development and predict the area and direction of development of the North Coast of Surabaya. The following are the objectives and research questions in this study.

1. Predicting the area of tidal inundation on the North Coast of Surabaya City in
2. Identify factors that influence land use change
3. Identify regional clusters based on the homogeneity of responses to factors that affect land change

1.3 Scope

The scope of the area in this study is the north coast of the city of Surabaya. Meanwhile, the scope of discussion in this study assumes that the conditions of land use change on the north coast of Surabaya City during the years 2002-2022 have a pattern or trend that can be reflected for the next 20 years. The analysis conducted in this study is limited as follows.

1. The modeling of tidal inundation in this study did not take into account the factors of land subsidence and shoreline changes. The factors used are DEM and the highest tides.
2. Land use modeling in this study does not accommodate the new land use class, which is not included in the projection base map, namely the existing land use map.
3. This study did not formulate land suitability in the formulation of the probability map of land use change. The map of the probability of land use change is generated from the pattern formed by the independent variable (land use class) and the independent variable (factors that affect changes in each land use class). This is done so that the prediction results truly reflect the adaptation of each land use to tidal inundation.

1.4 Research Contribution

In this study, the benefits of research are divided into two, namely theoretical benefits and practical benefits. The theoretical benefit of this study is the development of regional planning science. In this study, we will discuss methods for predicting the spatial development of urban areas, especially for areas that have developmental inhibiting factors in the form of tidal inundation. Thus, it can help researchers to understand the urban phenomena that occur on the north coast of Surabaya City more clearly. In addition, the expected benefit of this study is to provide important input to planners, government and society in predicting and making appropriate spatial policies.

1.5 Literature review

1.5.1 Impact of Tidal Inundation on Land Use

The trend of urban development on the island of Java forms a pattern of ribbon development, which is linear in the coastal areas, especially in the northern coastal areas of Java. This phenomenon has resulted in tidal inundation which is one of the disasters that has great potential to cause disruption to development activities and activities. According to Wuryanti (2002) the impact of tidal inundation is the inundation of land which increases coastal erosion and intrusion of seawater into the mainland, both of which have implications for the decline in clean water quality which results in health problems and a decrease in agricultural

productivity. According to Marfai et al. (2008), tidal inundation has an impact on people's daily activities such as domestic activities and other work. Public services that function to support domestic activities such as water supply and electricity cannot be used during high tides. The reason people don't work during high tides is that the trip is disrupted and there is no access to work and to take care of their families and household appliances. Based on the above, if it is correlated with the function of the coastal urban area which has regional functions as a port area, industry and warehousing, tourism, settlements. Tidal inundation is a very serious threat to the urban system, both from the internal and external aspects of the area. Tidal inundation as a negative externality from the environment has a significant impact on land value decline, areas that have a history of disasters tend to reduce land values that are low (Yunus, 2008). This decrease in land value has an impact on the lack of interest in land so that it has an impact on meeting land needs. The lack of interest in land that has a history of tidal inundation can result in changes in land use as an adaptation to land value decline.

1.5.2 Factors that cause tidal inundation

Tidal inundation can cause material losses and lead to a surge in personal or community needs. Many factors influence or cause an increase in tidal inundation in coastal areas. According to Marfai (2003) in general the cause of this increase is due to sea level rise, land cover changes, human population increases, and land subsidence. These three factors have a positive correlation with the increase in the incidence and area of tidal inundation in coastal areas. This was added by Hildaliyani (2009) who stated that the factors that influence the increase in the level of vulnerability to tidal inundation are changes in land cover from undeveloped land to built up land, changes in coastline, sea level rise. Based on this, if it is correlated with conditions on the coast of Surabaya City which has a phenomenon of a low rate of land subsidence, and a low rate of land cover change, this variable is not used as a variable in modeling tidal inundation. The variables used in this study as modeling variables for tidal inundation are sea level rise (HHWL) and DEM. If it is correlated with conditions on the coast of Surabaya City which has a low rate of subsidence and a low rate of land cover change, this variable is not used as a variable in modeling tidal inundation. The variables used in this study as modeling variables for tidal inundation are sea level rise (HHWL) and DEM. If it is correlated with conditions on the coast of Surabaya City which has a low rate of subsidence and a low rate of land cover change, this variable is not used as a variable in modeling tidal inundation. The variables used in this study as modeling variables for tidal inundation are sea level rise (HHWL) and DEM.

1.5.3 Land Use

According to Jensen (2000) land use is the designation and management activities in land management based on human interests such as settlements, offices, gardens, recreation areas and so on. Added by Arsyad (2010) land use is defined as any form of human intervention (interference) on land in order to meet the needs of life, both material and spiritual. Land use is a physical manifestation of objects that cover land and are related to human activities on a plot of land (Lillesand and Kiefer, 1987). Based on the above theory in this research, land use is the designation and management activities in land management in order to meet the needs of life, both material and spiritual.

1.5.4 Factors influencing land use change

Changes in land use can be influenced by two factors, the first is the factors that encourage physical, economic and social development of the region and the second is the factors that hinder the physical, economic, and social development of the region. The factors used in this study are distance from the CBD, distance from trade and service centers, distance from urban facilities, distance from industrial centers, level of accessibility to growth centers, distance from growth centers (trade and service centers) in areas bordering the research area. , slope, distance at the point where the road system meets, historical disaster. The following is the underlying theory related to this study:

No	City Development Theory	Substance	Factor
1	Growth Pole Theory	<ol style="list-style-type: none"> 1. Urban development (land use) is influenced by growth centers in the form of the CBD. CBD as a growth center has a locational advantage effect for areas that have a high level of accessibility to CBD. 2. Urban development (land use) is influenced by growth centers both functionally (industry) and geographically (concentration of facilities). The growth center in the form of an industrial area significantly affects the development of the city. This is based on the fulfillment of the need for industrial activities in the form of industrial worker settlements so that the closer the area is to the industrial center, the higher the potential for the area to develop. If viewed from the service center, development will be more directed to areas that are included or reached on the scale of service facilities so that the closer to the center of the facility, the higher the potential for the area to develop. 3. City development (land use) is influenced by proximity to areas that have a function as a provider of goods and services (trade and service centers) 4. Urban development (land use) is influenced by the level of accessibility to the growth center area. 	<ol style="list-style-type: none"> 1. CBD Center 2. Trade and Service Center 3. Industrial Center 4. Centralization of facilities 5. Accessibility to growth centers
2	Urban Base Theory	<ol style="list-style-type: none"> 1. Urban development (land use) is influenced by the provision of goods and services in the internal area of the city, also influenced by the provision of goods and services in areas directly adjacent to the city itself. 	<ol style="list-style-type: none"> 1. Growth Center (center of industry, trade and services) in the area bordering the research area
3	City morphology theory	<ol style="list-style-type: none"> 1. Urban development (land use) is influenced by slope. Built-up areas in modern conditions tend to be built on flat slope conditions 2. Urban development (land use) is influenced by the road network and especially the circulation system – transportation routes and meeting points (nodal points). This meeting point or nodal has a tendency to be the peak of land value so that it has great potential in the development of built-up land 3. Urban development (land use) is influenced by historical disasters. Disaster history is an inhibiting factor for urban development. Areas that have a historical disaster have low land values so they are less attractive. 	<ol style="list-style-type: none"> 1. Slope 2. Roads and meeting points between road networks 3. Disaster History

Table 2.1 Theory of Land Use Change

Based on the theory related to regional development, the factors used in this study are distance from the CBD, distance from trade and service centers, distance from urban facilities, distance from industrial centers, level of accessibility to growth centers, distance from growth centers (trade and service centers)) in the area bordering the research area, slope, distance to the meeting point of the road system, historical disaster. The following are previous studies that underlie this research:

No	Title	Writer	Source	Target	Variable	Method	Output
1	GIS Modeling in Coastal Flooding Analysis : A Case Study in the Yellow River Delta, China	Xiajun Yang	Department of Geography, University of Georgia	1. Knowing the new areas of flooding	-Land-wide use	DEM and Idrisi Analisa analysis	find out new areas of flooding caused by high tides
				2. Knowing the probability of a new flood area	-broad-probability		
				3. Knowing the new flood area with a risk level of 20%	-Land-wide use		
2	Simulation of Urban Land Development and Land Use Change Employing GIS with Cellular Automata	Tsai-chu Wu, bo-yi Hong	Dept. of land management and development , Chang Jung christina university, Taiwan	1. Knowing the variables that affect land change	-vacant use, residential use, commercial use, official land, school sites, parks, roads, gas stations and parking lots, sewage farm and substation, conserved land. land price, land price growth rates, the number of land ownership, population: Unit grid average population, the number of public facilities, distance to the nearest roads, floor area ratio.	Model logistic regression	Land Use Prediction in 2016
				2. know the probability of land development model			

No	Title	Writer	Source	Target	Variable	Method	Output
				3. Prediction of land use change 2007-2016		Cellular Automata Simulation	
3	Vulnerability assessment of combined impact of sea level rise and coastal flooding for china coastal region using remote sensing and GIS	Jie Yin, Shiyuan Xu, Jun Wang and friends	Department of Geography Shanghai Normal University	1. vulnerable land areas with high tides 2. rental land area with high tide flood 3. social and economic vulnerability 4. strategy and adaptation	-high tide prediction sea-year-wide impact from flooding on land	DEM analysis DEM analysis	identification of coastal areas of China that are vulnerable to flooding caused by rising sea tides.
4.	Determination of land use effect on flood risk by using integration of GIS and remote sensing	irfan roots and friends	dept. of middle east geographu beyazit, istanbul, turket	1. Land use characteristics and hydrological risks 2. hydrological modeling and flood mapping 3. the creation of the flood model	-Classification of land use -history of flood events -river flow-river cross-sectional-land use	supervised classification using erdas 9.1 modeling flood repetition frequency Using HEC Georas modeling	making flood modeling based on the frequency of repetitions per year 10, 50, and 100 years
5	STUDY OF THE IMPACT OF LAND USE DYNAMICS ON EROSION AND HYDROLOGICAL CONDITIONS OF WANGGU WATERSHED	La Ode Alwi1, Naik Sinukaban2, Soleh Solahuddin 2, and Hidayat Pawitan2		1. The dynamics of land use in the Wanggu watershed 2. Impact of land use dynamics on erosion and hydrological conditions 3. evaluation of land use suitability	-classification of land use-year-area change -prediction of erosion-surface runoff-surface flow coefficient-river regime coefficient -land capability class-Land use-erosion-Etol	last year and most recent year area calculation comparison of land use dynamics in different years comparison of erosion value and Etol value for each land use class	determine the influence of land use dynamics with erosion and hydrological conditions
6	Simulation of Land Use Change using Genetic Algorithms Neurology Network Based Cellular Automata	Cao Min, Shi Xiao	Key Laboratory of Virtual Geographic Environmental Ministry of Education,	Comparison of results from land use prediction using ANN-CA and GANN-CA	-model accuracy value		This study shows that the GANN-CA model has better simulation results with smaller neural

No	Title	Writer	Source	Target	Variable	Method	Output
			Nanjing Normal University				network errors and higher accuracy results.
7	Simulation of Precise Scale Land Use Change Based on the Markov-cellular Automata Model	Shuqing Wang, Xinqi Zheng, Lin Wang	School of Land Science and Technology, China University of Geosciences	1. Land use change analysis 2001 and 2005	-Land use-area comparison	Cellular Automata-Markov	based on the results of the study show that it is possible to simulate future land use change using precise and high-resolution maps
				2. Land Use Prediction in 2012	-Land use-area comparison		
8	Research of Flood Risk Map Information Management System Based on ArcGIS	Hongliang Gou, Shuguang Liu, Guihui Zhong	Department of Hydraulic Engineering, Tongji University, China	create a flood risk map information management system	-map data-Social geography-Hydrological data-Engineering data-Rescue Materials	GIS Analysis	creation of a flood risk map information management system based on GIS
9	Global land-use and land-cover change : What we learned so far	HJ Geist and Ef Lambin		Knowing the influencing factors of land use change	-big economic changes-technological effects-social-political factors-changed policies		factors influencing land use change
10	modeling land use land cover changes using cellular automata in a geo-spatial environment	Anuj Kumar Singh	international institute for geo-information science and earth observation, Enschede, Netherlands	Identification of land use classification	-Land Use Class-Year	Cellular Automata Analysis	land use prediction
				Knowing the factors that affect land use	-rainfall-slope-slope-height-aspect-distance from roads-distance from city-distance from tourist center-distance from industry		
				Land use prediction			

Source: Literature Review, 2022

1.6 Research methodology

The research approach used is a rationalism approach, which is a method that believes that the source of truth comes from sensual empiricism, logical empiricism (thought, abstraction and simplification) and ethical empiricism (idealism and reality) (Djumaedi, 2002). The purpose of research with a rationalism approach is to build a theoretical conceptualization

related to multi-hazards and land use vulnerabilities that are realistic so that they are accessible to human reasoning. This type of research is descriptive research which aims to make a systematic, factual and accurate description of the facts and characteristics of certain research objects.

The analytical method used to predict land use change in the North Coast of Surabaya was carried out in four research targets. The first stage is the prediction stage for the distribution of tidal inundation in the next 20 years. Analysis related to the prediction of the distribution of tidal inundation using two data, namely HHWL and DEM. The results of the analysis at this stage will be used in the analysis of the probability map of land use change as an inhibiting factor for land use change.

The second stage is to identify factors that influence land use change. Factor identification was performed using v-cramer's analysis. This analysis is carried out on every land use change identified in the North Coast of Surabaya City for the period 2002 – 2022. In predicting land use change, in addition to analyzing the factors that influence land use change, an analysis related to the trend of land use changes is also needed.

The third stage of this research is to conduct a cluster analysis based on the sub-region's response to the factors that influence the development of the city. The analysis was carried out on raster data using Raster Multidimensional Scaling analysis so as to be able to produce cluster analysis that was able to explain urban phenomena spatially.

The fourth stage in this research is an analysis of the tendency of land use changes to determine the type of land use change that occurs and the direction of the land use change. Probability analysis of land use change is also carried out in this third stage. This analysis is useful for identifying areas that have the potential to experience land use change. Probability analysis of land use change is carried out on each type of land use change identified.

The results of the analysis of stages I, II, III and IV are used as the basis for the analysis of land use change. So it can be concluded that in the analysis of land use changes, three core data are needed, namely factors that affect land use changes, trends in land use changes and the probability of land use changes. Figure 1 presents an explanation of the analytical method and a description of the analysis used based on the research objectives.

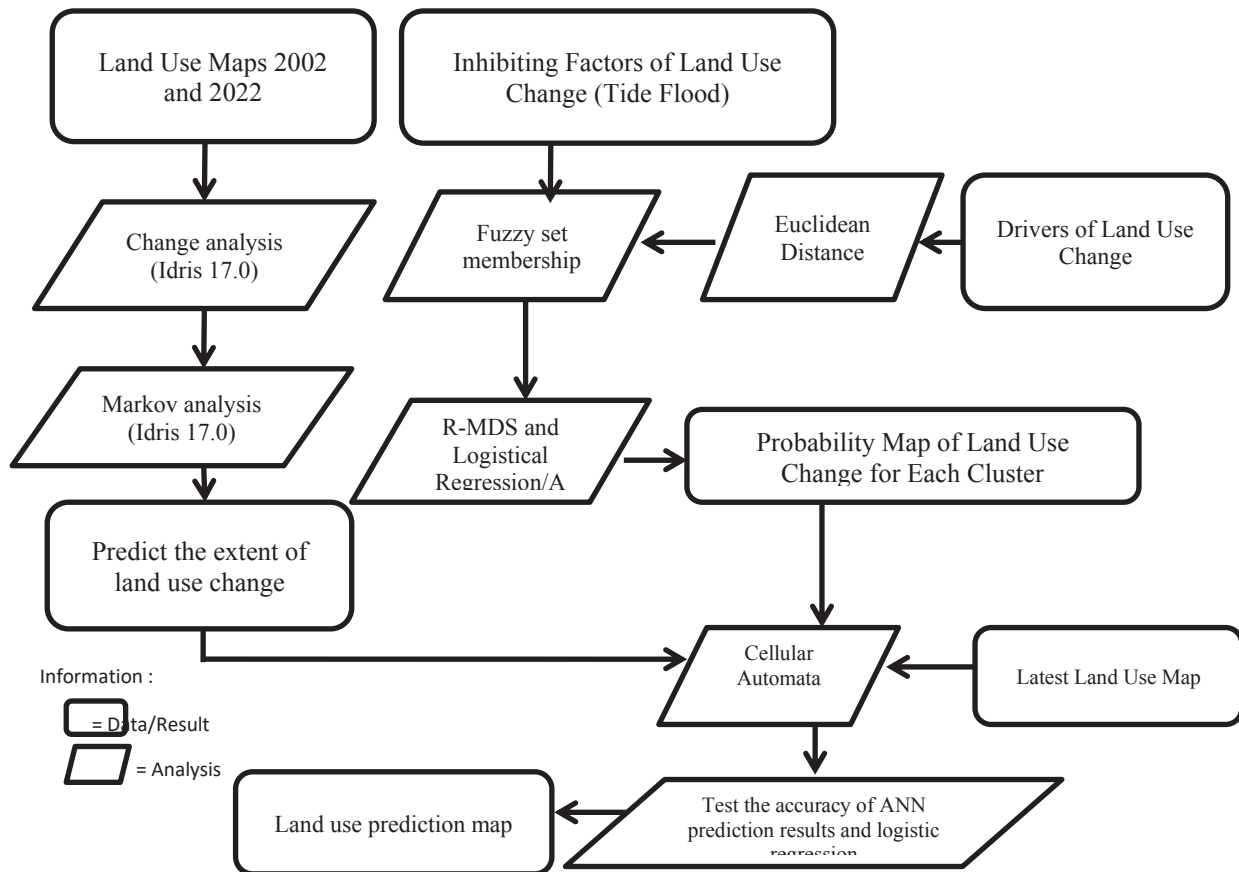


Figure 1. Flow of Research Methodology

1.7. Results and Discussion

1.7.1 Predicting the area of tidal inundation on the North Coast of Surabaya City

Prediction of the distribution of tidal inundation in the North Coast of the City of Surabaya adapted from the research of Pratomoatmojo (2012). The data used in this analysis are DEM and the highest tide (HHWL). The DEM used in this analysis is the DEM from spline interpolation. Spline interpolated DEM has the lowest RMSE value so it has the highest level of validity when compared to the kriging interpolation method. **Figure 2** presents a flow analysis of the distribution of tidal inundation in the North Coast of Surabaya City.

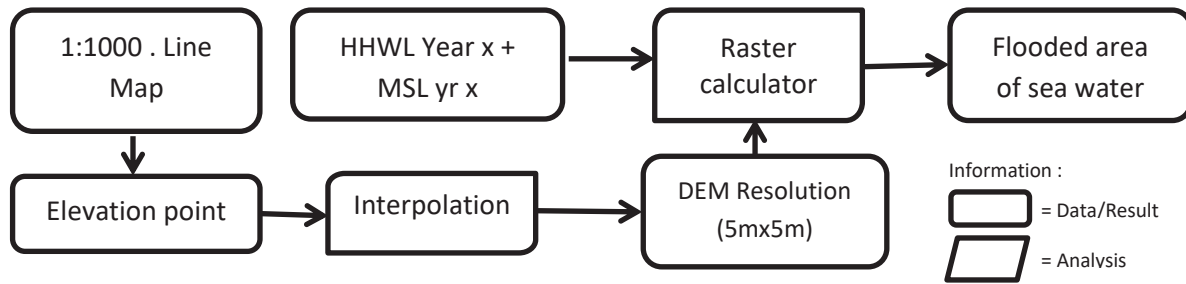


Figure 2. Inundation Potential Analysis Flow

In the raster calculator process, the equations used in the modeling to produce a tidal inundation area are as follows.

$$\text{Inun2030} = \text{CON}([\text{DEM}] \leq \text{HHWL}), 1, 0) \dots \dots \dots (1)$$

The above equation is used to model inundated and unflooded areas. The flooded area is symbolized by 1 and the unflooded area is 0. The next analysis is to determine the maximum height using the following formula .

$$\text{L_inun} = [\text{Inun}] * \text{HHWL} \dots \dots \dots (2)$$

This equation is a transition equation to formulate the depth and inundated area . The basic data in this study are DEM modeled results and HHWL.

$$\text{Depth2030} = \text{CON}(((\text{L_inund}] - [\text{DEM_}]) * [\text{Inun}]) \text{0,0,Depth}) \dots \dots \dots (3)$$

1.7.2 Identifying factors that influence land use change in the North Coast of Surabaya City

The analysis to identify the factors that influence land use change in the North Coast of Surabaya City uses a quantitative factor analysis method using the v-cramer's value. V-cramers were used to measure the strength of the association between variables. In this study, the lower limit value used as a reference that the land use factor has a relationship or correlation with land use changes is 0.20. The factor having v-cramer's value 0.20 is used as a factor of land use change.

The identified factors are then used in the next stage, namely in the stages of logistic regression analysis and neural network analysis. Factor treatment in logistic regression analysis and artificial neural network analysis had significant differences, in logistic regression analysis

the second factor analysis was carried out after factor analysis using v-cramer's. Factor analysis performed in logistic regression analysis is the ROC value, pseudo R-square value and standard deviation. Meanwhile, in the analysis of artificial neural networks, the factors resulting from the v-cramer's analysis are directly used as factors that influence land use changes.

1.7.3 Identify regional clusters based on the homogeneity of responses to factors that affect land change

This sub-chapter discusses spatial analysis to perform cluster analysis where the analytical tool used is R-MDS or multidimensional scaling raster analysis which is more directed at uniform non-hierarchical clusters, the selection of non-hierarchical clusters as the basis for analysis is adjusted to the type and purpose of the analysis. where the type of data used does not represent strata and the purpose of the analysis is to find a homogeneous cluster of spatial data (raster) that is able to represent in detail the character of the area based on the inhibiting and driving factors of urban development.

1.7.4 Predicting the land use of the North Coast of Surabaya to accommodate tidal inundation

In this sub-chapter, we will discuss the prediction of land use on the North Coast of Surabaya City. This land use prediction analysis is divided into three stages, namely making a map of the probability of land use change, prediction of pixel changes from each land use class and prediction of land use change. The following is a scheme that presents the analysis stage in producing a predictive map of land use change

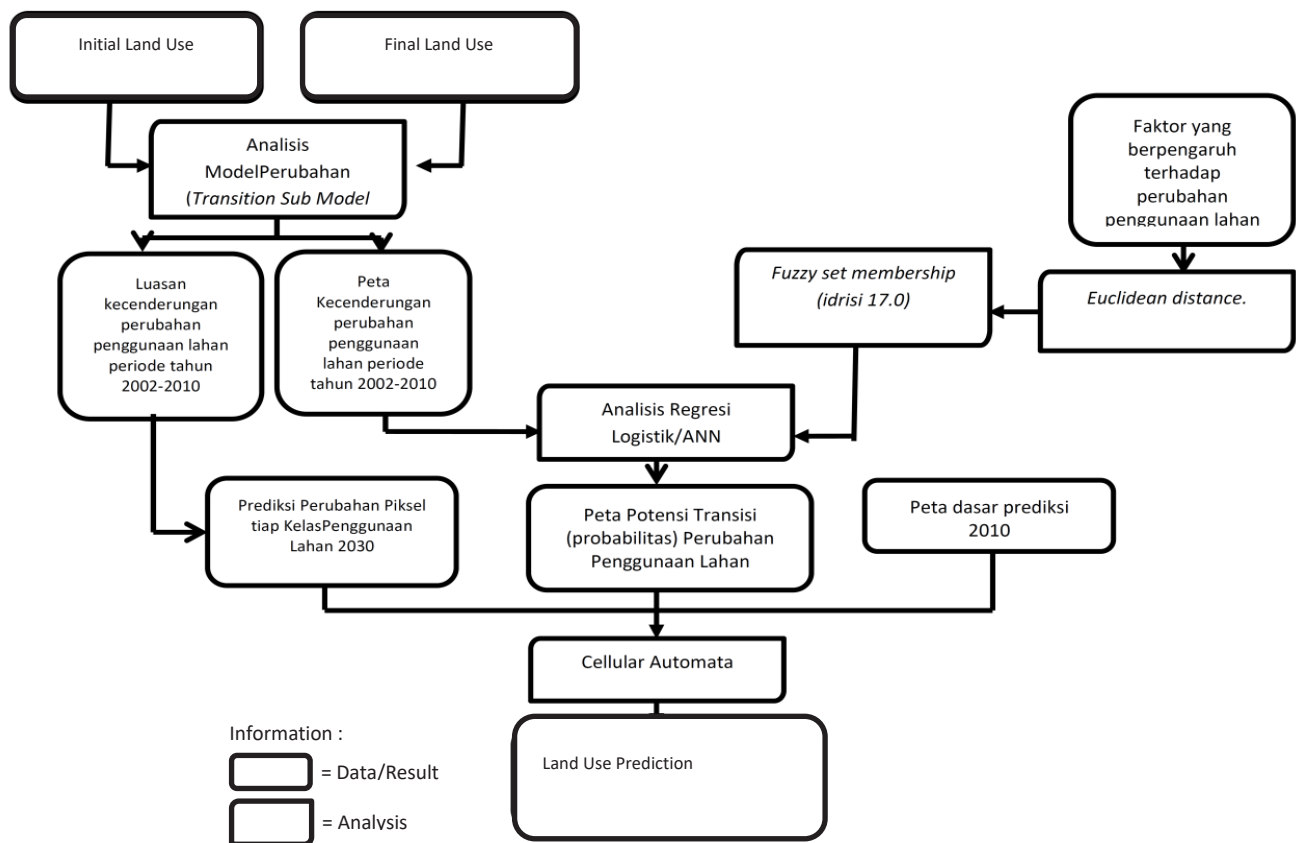


Figure 4. Prediction Flow of Land Use Change

In the stage of making the probability map of land use change, it is divided into four stages of analysis. The analyzes are Euclidean distance analysis, fuzzy set membership analysis, logistic regression analysis and artificial neural network analysis. This Euclidean distance analysis is a representation of the factors that influence land use change. These factors focus on the magnitude of the distance between a location and the growth center where each factor has a high correlation with the growth center. The results of the Euclidean distance analysis that contain distance information from each factor that affects land use change have different intervals. These different intervals have several drawbacks when analyzed statistically. The difference in the value of the upper and lower limits of each result of the Euclidean distance analysis significantly affects the reduction in the level of validation of the model to be analyzed. Therefore, in this study, the standardization method will be used using fuzzy set analysis, namely by equating the upper and lower limits of each factor analysis result. *Euclidean distance* to 0 (lowest) and 1 (highest). If correlated with *Euclidean distance*

the closer to the center of growth or factors that affect land use change, the higher the value. Fuzzy can homogenize data values from the range 0 (low) to 1 (high) so that in data analysis there is no need to do a Z-score to make the data standard. In this study, the fuzzy set used is the sigmoidal type (monotonically decreasing).

This monotonically decreasing type is formed on the driving factors of urban development because each factor has a function as a growth center. The center of activity has a tendency, the closer it is to the growth center, the higher the potential for an area to develop and vice versa, the farther from the growth center, the lower the potential for an area to develop. In determining the values of c and d in the sigmoidal equation, c is the distance o from the factor and d is the farthest identified distance from the factor.

The results of this fuzzy analysis are then used in logistic regression analysis and neural network analysis. Specifically for logistic regression analysis, factor analysis was performed again, while in the analysis of artificial neural networks, the results of factor analysis using v-cramer's were directly used in the analysis of artificial neural networks in the formulation of probability maps of land use change.

Based on the results of logistic regression analysis and the artificial neural network used to formulate the land use probability map, the next step will be to analyze the prediction of land use change using the cellular automata method. In the modeling phase of land use change prediction, the cellular automata method is used with the Idrisi 17.0 analysis tool. In this analysis using three data, the following are the three data used in this analysis.

- a. Land use base map: as for this research is the land use map of the early years as the last multitemporal data.
- b. Land use probability map: map of the probability of land use change from the spatial results of logistic regression and neural network analysis.
- c. Number of land pixels that changed: the predicted result of pixel changes from each land use class at the end of the prediction. The maps that are used as a reference for predictions are the 2002 and 2022 maps.

1.8 Conclusion

Based on the explanation of the mindset above, the following are the conclusions from the above study:

1. Conceptually, historical disasters have a negative correlation with the acceleration of development or the development of a city. By using the perspective in this study, it is expected to be able to identify response anomalies from historical disasters to urban

development. In addition, by using this mindset, spatial phenomena can really be analyzed spatially (raster data) using data, analytical tools and outputs that are able to explain spatial phenomena quantitatively and measurably.

2. In conceptual analysis, the study is directed to use spatial analysis tools using raster basic data which has a basic analysis pattern similar to matrix analysis. So that each component of the spatial data and spatial characteristics can be explained in detail spatially
3. Conceptually, this study aims to determine the balance point that is formed as a result of the driving factors that lead to the economic aspect and the limiting factors that lead to the ecological aspect.

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STAKEHOLDERS ENGAGEMENT: CAPITAL TO GAIN SOCIAL LICENSE TO OPERATE IN MINING INDUSTRY

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A social license to operate (SLO) is very important for the mining industry. Without social license from the community around the mine, mining operations cannot run smoothly. To achieve this, community involvement in the preparation of social programs is an important step so that the programs that are rolled out are in accordance with the needs of the community and receive support in its implementation. This research will find out how the mining industry builds relationships with its stakeholders?; How is the involvement of stakeholders in the preparation of corporate social programs?; and what is the impact of community involvement in the preparation of social programs on mining operations? This study uses a qualitative approach with ethnographic research method. The research was conducted at PT Kaltim Prima Coal (KPC), a coal mine located in Sangatta, East Kalimantan. Primary data is taken based on the results of in-depth interviews with stakeholders as informants, while secondary data is obtained from sustainability reports and other documents at KPC. The results of the research show that KPC places good relations with stakeholders as an important part of good mining practice. This can be seen in various existing policies and is manifested in the involvement of stakeholders in the implementation of corporate social programs. Stakeholders have communication channels with corporations regarding the required social programs, either through the proposals they submit or discussions held directly by the corporations. Furthermore, the social program is prepared based on the local government's work plan, so that the program promoted by the company is in line with the program launched by the local government. Various positive opinions emerged from the public, both submitted directly to corporation and reported in local media. Community involvement in the preparation of social program has an impact on a harmonious relationship between KPC and the community around the mine. It is evidenced by the absence of community disturbances which resulted in the termination of the company's operations.

Key words: Social program, SLO, stakeholders, mining industry

INTRODUCTION

Mining is an industry that is very vulnerable to social problems. In particular, this industry is often faced with the issue of the impact of mining on the lives of communities around the mine as well as environmental issues. Various studies were carried out by scholars related to the impact of mining on the surrounding social problems.

Apriyanto and Harini (2012) in their research entitled "The impact of coal mining activities on the socio-economic conditions of the community in the village of Loa Ipuh Darat, Tenggarong, Kutai Kartanegara" said mining has an impact on the socio-economic conditions of the community

which trigger migration, conflict, strained kinship relations, and the emergence of prostitution. While Listiyani (2017) in her research "The impact of mining on the environment in South Kalimantan and its implications for the rights of citizens" emphasized that mining has a negative impact on the environment, such as decreased land productivity, increased soil density, erosion, and sedimentation, soil movement or landslides, disruption of flora and fauna, disruption of public health and impact on microclimate changes.

As an issue-prone industry, mining industry operations really need the support of the surrounding community so that its operational process runs smoothly. Community relations with mining and community attitudes towards the presence of mines are shaped by complex interactions between mining companies and surrounding communities and government efforts in sustainable development. Therefore, a number of studies that previous researchers have carried out have focused on mining issues and social permits. Based on the results of these studies, a number of researchers recommend a specific approach to sustainable mining. For example, Owen and Kemp (2013) recommend setting a collaborative development plan for an industry with a focus on stakeholder engagement, while Dare et al. (2014) concluded that community involvement has an influence on the achievement of social license.

The issue of social licenses is closely related to the concept of stakeholders. The classical definition states that a stakeholder is 'any group or individual who can influence or be affected by the achievement of the goals of the organization' (Freeman 1984: 46). A broader definition is put forward by Gray, Owen, and Adams (1996, p. 45) which states that a stakeholder is 'any group or individual who can be influenced by or can influence himself, the activities of the organization. Friedman and Miles (2006, p.13) state that local communities are a form of stakeholder.

In mining practice, the presence of local communities directly affects the company's operations. Their existence is closely related to the issue of social permits, which are an important capital for smooth mining operations. A social permit is not a formal contract between a corporation and the surrounding community. SLO is an informal social contract. Even though it is informal, SLO is the main key for mining, because this permit is the legality of the community in supporting mining operations. In general, SLO will avoid potentially costly conflicts and exposure to business risks.

For the mining industry, a SLO can be said to exist when a mining project is seen as having the broad, ongoing approval and acceptance of society to conduct its activities (Prno, 2013).

Meanwhile, Kamnitsas (2020, p. 2) explains that SLO is intended to bridge the gap among the views of the most important stakeholders involved in mining activities and in particular to take into account the views of the general public. Thomson and Joyce (in Ziessler et al., 2013) explained that in many countries the legal, government-granted right to explore or mine doesn't guarantee universal approval of a project and that other ways of gaining social acceptance for the mining activity must be found. According to Thomson and Joyce, the SLO stands for gaining legitimacy, credibility, and eventually trust by the local community, resulting in approval and a broad acceptance of society to conduct its activities.

The success of corporations in obtaining SLO contributes to the creation of corporate sustainability. To achieve this, the mining company must be able to create communication patterns that balance three interests, ecological, sociological, and corporate business. Ferguson (in Ndlela, 2019, p. 25) stated, "Living in an information age requires organizations to constantly communicate their activities and intentions to the different stakeholder constituencies. Moreover, the volatility of the environment of many organizations necessitates the presence of a strong communication component."

Obtaining a social license is an important indication that the mining industry is conducting stakeholder management properly. R. Edward Freeman & Phillips (in Ndlela, 2019, p. 17) mentions the central idea in stakeholder theory is that "an organization's success depends on how well it manages relationships with key groups such as customers, employees, suppliers, communities, financiers, and others. -other things that can affect the realization of its objectives. Although stakeholders consist of many groups, the stakeholder context in this study only focuses on local communities, which directly affect mining operations. This research will find out how the mining industry builds relationships with its stakeholders?; How is the involvement of stakeholders in the preparation of corporate social programs?; and what is the impact of community involvement in the preparation of social programs on mining operations?"

RESEARCH METHOD

This research uses a qualitative approach. According to Cresswell and Poth (2018, p.45), "We conduct qualitative research because a problem or issue needs to be explored... These are all good reasons to explore a problem rather than to use predetermined information from the literature or rely on results from other research studies." The method used in this research is ethnography.

According to Wolcott (in Creswell and Poth, 2018, p. 91) ethnographies focus on developing a complex, complete description of the culture of group-the entire culture-sharing group a subset of group. The culture-sharing group must have been intact and interacting for long enough to develop social behaviors of an identifiable group that can be studied. The key to ethnographic research is the focus on the discernible working patterns, not the study of culture.

This research was conducted at PT Kaltim Prima Coal (KPC), a coal mining company located in Sangatta, East Kutai Region, East Kalimantan. Primary data is taken based on the results of in-depth interviews with stakeholders as informants, while secondary data is obtained from sustainability reports and other documents at KPC. The informants consist of people living around the KPC mine which represent various components, such as small and medium entrepreneurs, farmers, community leaders, teachers, NGO activists, and also the government. They are individuals who have direct experience with the research subject. According to Streubert and Carpenter (2011, p. 28), informants are "individuals who are selected to participate in qualitative research based on their first-hand experience with a culture, social process, or a phenomenon of interest".

Data analysis was carried out in three stages, data reduction, data presentation, and conclusion. The data in this study are presented in the form of narrative text. Miles et al. (2014, p. 13) said "the most frequent form of display data for qualitative research data in the past has been narrative text". In this section, all interview results are summarized and written in sentence form so that the essence of the interview results obtained is easy to be understood.

RESULT AND DISCUSSION

Stakeholder Engagement as the Basis for KPC's Social Performance

PT Kaltim Prima Coal (KPC) is a coal mining company based in Sangatta, East Kalimantan, Indonesia. KPC is one of the largest open-pit mining operators in the world with a total coal mining concession area of 84,938 ha in Sangatta, Bengalon, and Rantau Pulung, East Kalimantan, Indonesia (KPC, 2021). In carrying out its social performance, KPC is based on the motto "more than mining". KPC does not only focus on mining and seeks profit from its mining operation but also cares about the welfare of the surrounding community.

In carrying out its social programs, KPC is committed to always involving its stakeholders. This commitment is also a manifestation of the company's obedience to government regulations that view stakeholder involvement as a benchmark for the success of corporate performance. This

is stated in the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia No. 1 of 2021 regarding the company's performance rating program in environmental management. In the regulation, it is stated that one of the assessment criteria is the engagement of stakeholders in carrying out environmental management performance. Corporations are required to have a stakeholder engagement document, which includes the scope of actors and regions, the approach used, to the results of the involvement of the stakeholders.

Referring to these rules, KPC specifically creates a community development policy (KPC, 2019) which is the umbrella rule for implementing social programs. It is hoped that the policy will become the basis for performance so that the program that is rolled out is in accordance with the expectations of the community and is right on target. Mapping the priority scale of social program beneficiaries is divided into four priority scales. The first priority covers four sub-districts, namely North Sangatta, South Sangatta, Bengalon, and Rantau Pulung. Wawan Setiawan, GM External Affairs and Sustainable Development Division explained:

This sub-district is the area closest to the KPC mining area which is directly affected by mining operations. Therefore, KPC pays full attention and care to the people in the area (interview, October 13, 2022).

Furthermore, the second priority is the Regency in East Kutai, the third is the Province of East Kalimantan, and the fourth is on a national scale covering Jakarta and areas outside East Kalimantan.

In addition to regional mapping, KPC also sets program priorities which are described in seven program areas, namely improving public health and sanitation, developing education and training, developing agribusiness, developing small/medium enterprises and entrepreneurship capacity, improving community infrastructure, preserving nature and culture, strengthening community institutional capacity. To facilitate the implementation of community programs, KPC does not work alone. Stakeholder engagement is an important step taken by this company. In other words, the community is a corporate partner in developing and implementing community programs. Faizal, Superintendent of Local and Business Development said:

When KPC initiates the program, we will discuss with various components of the community to find the right way when the program is implemented. In addition, several community programs were also launched by KPC based on suggestions or expectations from the community. So not all programs are top-down, from KPC to the community (interview, October 14, 2022).

The explanation shows the direct involvement of stakeholders in social program implementation. It's not just a matter of creating programs that link and match the needs of the community, but KPC also takes another step to build good relations with the community. KPC believes that community development will run well if it is accompanied by good community relations. Regarding this, Nurrahmat Hendayana, a Community Relations officer said:

We maintain good relations with community leaders, including religious and traditional leaders, government agencies, as well as community organizations. Our meetings are scheduled regularly, not only when KPC has problems. We also open the door of communication by submitting proposals related to various activities. In this way, we hope that they feel cared for, so that they can become KPC's partners in solving problems that arise (interview, October 14, 2022).

Community involvement in planning and implementing community programs are also carried out by KPC in Bengalon area, which in fact is a priority area for community program development policies, considering that some of KPC's mining enters the area. Syahrudin, the Manager of Community Relations and Development Bengalon explained;

The form of KPC's community program in the Bengalon area follows the bottom up model. We discuss with officials from 11 villages in the Bengalon area relating to various village development programs that they have planned. After a mutual agreement is reached, KPC will assist with funding and continue to monitor and assist the implementation of the program. KPC realizes that the involvement of the Bengalon community is an important factor for the smooth operation of KPC, considering that some of KPC's mining areas are in this sub-district.

The various explanations above illustrate that stakeholders engagement is KPC's main concern in carrying out corporate performance. It is even considered an important part of good mining practice, a practice that sees social issues as an important part of mining operations.

Stakeholder Engagement and Social Program Implementation

Stakeholder involvement as part of KPC's performance is closely related to the smooth implementation of social programs. KPC coordinates and communicates on an ongoing basis with stakeholders so that the programs rolled out are in accordance with their needs. For several programs whose implementation requires community involvement, KPC formulates together with relevant stakeholders. For example, programs in health, agribusiness, and Micro, Small, and Medium Enterprise Development. In addition, social programs are often based on community requests and expectations which are presented in the form of proposals. On the other hand, some

programs are top-down, such as community education scholarships whose implementation is handled directly by KPC, and the community could receive benefits from the program.

Community involvement in the KPC program is also manifested in the form of sustainable partnerships, a form of mutually supportive and beneficial partnership to achieve sustainability. To achieve this, the company held an Assisted Local Supplier Program which is specifically managed by the Local Business Development (LBD) division under the Supply Chain Division and the External Affairs and Sustainable Development Division. This initiative is an implementation of KPC's corporate responsibility in promoting the growth and welfare of local entrepreneurs and the community. In 2021, KPC assisted 21 local suppliers with a total purchase of USD 1.33 million (2021, p. 206).

Although it has involved the community in various programs, KPC still opens the channel for communication in the form of a community feedback system. This program is intended to open up opportunities for people who wish to submit complaints related to mining operations. In resolving various complaints, the company conducts intensive communication with community and government leaders at the village, sub-district, and district levels.

Various stakeholder involvement efforts are recognized by the community around the mine as a good breakthrough from KPC. Hasdiah, Head of North Sangatta Sub-district, a sub-district that is in direct contact with KPC operations said:

KPC's social programs really help the community and the government in developing the region. In carrying out these social programs, KPC always prioritizes coordination and communication with the community. The community is always involved because, in every assistance and program that is rolled out, the community is expected to contribute even though it is only in the form of ideas and manpower for implementation in the field. (interview, 15 October 2022).

A similar confession was also conveyed by a small and medium business actor named Nafisatul Salwa. According to him, KPC always invites community deliberations in program preparation. On the other hand, the community contributes in the form of ideas and suggestions so that the program runs according to the community's needs (interview, 13 October 2022). Meanwhile, Edy Endang, a seed farmer, saw that KPC's relationship with the community was going very well. KPC's social programs have proven to be prosperous for many parties in East Kutai. As a supplier of plant seeds for reclamation, he feels that he is not only given a job but there is always

communication and learning about performance in the nursery sector (interview, 16 October 2022).

Meanwhile, Rubito, Principal of Senior High School of Shout Sangatta District said: KPC routinely involves the community in the preparation of community programs to explore and discuss community needs. This is done through meetings or deliberation with parties who will be directly involved in the program. In addition, KPC is a company that cares about the development of the social sector, especially related to education (interview, October 16, 2022).

The various comments from the community above are not much different from the results of the community satisfaction survey on the community development program conducted by Corporate Forum for CSR Development (CFCiD) in 2018. The results of the survey stated that the level of community satisfaction with KPC's community programs reached 78.78% (2021, p. 178), as illustrated in the survey results below:

Indikator Pertanyaan		KN	KP	KN x KP	IKM
Kejelasan Prosedur	I1	3,97	4,51	17,939	79,49
Perencanaan Partisipatif	I2	3,97	4,49	17,807	79,32
Kegiatan berbasis Kebutuhan	I3	4,42	4,71	20,813	88,37
Partisipasi Komunitas di Implementasi dan Monev	I4	3,87	4,30	16,626	77,39
Tingkat Keswadayaan komunitas	I5	3,85	4,34	16,730	77,08
Pengetahuan dan keterampilan Fasilitator	I6	3,84	4,43	16,988	76,75
Fasilitator Engagement	I7	3,85	4,47	17,208	76,92
Peningkatan modal sosial	I8	4,18	4,52	18,902	83,69
Peningkatan pengetahuan atau keterampilan beneficiaries	I9	4,00	4,42	17,660	79,93
Keberdayaan beneficiaries	I10	4,00	4,46	17,852	80,07
Keberdayaan masyarakat desa	I11	3,83	4,38	16,761	76,51
Peningkatan kesejahteraan secara luas	I12	3,91	4,39	17,171	78,17
Keberlanjutan	I13	3,24	4,06	13,155	64,81
Benefit kepada KPC	I14	4,13	4,28	17,691	82,58
	TOTAL		61,77	243,30	78,78

Tabel 1. Community Satisfaction Index

In the survey results above, it is known that the indicators of needs-based activities achieve 88.37 which means very satisfying. This shows that community involvement in determining community programs is quite significant.

Stakeholder Engagement and Contribution to Social License

Community involvement in the planning and implementation of KPC's social programs contributes to the emergence of positive opinions toward corporations. This is not only seen from

various statements of informants and survey results conducted by KPC. This positive opinion can also be seen in the many positive news about KPC.

As shown in the research entitled *Local Media Engagement: Communication Strategy to Gain Social License to Operate in Mining Industry* (Mahmudah, 2021) bahwa based on KPC's media monitoring data from January to December 2019, the number of KPC news reports spread across 10 local media reached 600 news, with a composition of 577 with a positive tone, 3 with a negative tone, and 20 with a neutral tone. Meanwhile, during 2020 the number of news stories reached 701, with a composition of 675 positive, 11 negatives, and 15 neutral news. Meanwhile, in 2021, data was taken from January to August, totaling 305 news items with a composition of 288 positive, 14 negative, and 3 neutral tone. One of the positive recognition of the community in media was conveyed by Wimpianus, a student who received a KPC scholarship from Mulawarman University. "I saw for myself that the presence of KPC in East Kutai had a tremendous impact, both in terms of infrastructure, education, and environmental management, as well as assistance for houses of worship (Pro Kutim, 2021).

Indirectly, these various opinions indicate the existence of a social permit from the local community to KPC. The social license contributes very significantly to the smooth operation of the company. This is evidenced by the absence of interference from the local community which has an impact on the termination of the company's operations.

CONCLUSION

Stakeholder engagement is the main basis for KPC's performance. This commitment has been proven by this company in various forms, such as the formulation of community development policies which are the umbrella rules for implementing social programs. Community involvement is carried out through various mechanisms, such as coordination and discussions related to the program to be rolled out and the participation of the community as partners who are directly involved in program implementation.

KPC coordinates and communicates on an ongoing basis with stakeholders so that the programs rolled out are in accordance with their needs. Several programs whose implementation requires community involvement, KPC formulates together with relevant stakeholders. In addition, social programs are also often based on requests and expectations of the community

which are submitted in the form of proposals. On the other hand, some programs are top-down, especially those whose implementation is handled directly by KPC and the community is only the beneficiary of the program.

Community involvement in KPC's social planning and programs contributes to the implementation of positive opinions towards the corporation. Indirectly, these various opinions are generally social permits from the local community to KPC. The social license contributes very significantly to the company's operations. This is evidenced by the absence of interference from the local community that has an impact on the company's operations.

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STRATEGIC ENTREPRENEURSHIP: THE ROLE OF HUMAN RESOURCE PRACTICE AND IT CAPABILITIES IN MANAGING PERFORMANCE FIRM

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Abstract

Research on Corporate Entrepreneurship is currently being widely discussed by researchers. It is companies that try to continue to achieve targets, and how the internal environment helps or supports the company in achieving its vision and mission. Internal environment is people and technology, in the process helping the company to achieve what has been formulated. In utilizing an information technology (IT), business operations and IT investment must be strategically coordinated and aligned.. This research uses Structural Equation Modeling (SEM) with Partial Least Square (PLS) approach. Data is collected from 100 business units from divisions that are directly related to measurement variables, namely Information & Technology, Human Resources and Operations in several industrial pillars in Indonesia. The findings highlight that technology has a direct impact on corporate entrepreneurship because the progress of the times makes every industry player need to implement technology for data integration. And Human Resources also has a direct impact on Corporate Entrepreneurship where every organization needs to implement Strategic Human Resources to assist employees in hire to retire activities. These two variables are also assisted by dynamic capability, so that each individual or platform used has followed the applicable rules, thus leading to Learning Growth and Internal Business Processes in good performance.

Keywords: *Corporate Entrepreneurship, Human Resource, IT Capabilities and Dynamic Capability*

Sustainability Criteria for SMEs Using the Pentuple Bottom Line Approach with the AHP Method

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Abstract, SMEs (small-medium enterprises) in Indonesia are rapidly developing with various types of businesses, especially in the city of Malang, Indonesia. In running their businesses, every SMEs is required to maintain the sustainability of their businesses. Therefore, sustainability needs to be considered if SMEs plans to survive and compete on a local, national, and international scale. Sustainability includes five main aspects, which are economic, environmental, social, phenotechnology, and spiritual. In addition to increasingly fierce competition and the decline in people's purchasing power due to the COVID-19 pandemic and the swift and dynamic changes in the business environment, their income has also decreased due to the pandemic. This is because many Tempe SMEs have to survive under challenging conditions. Based on this problem, research was conducted to analyze the pandemic's impact on Tempe SMEs' sustainability, especially in Malang City, Indonesia. The study aims to develop a hierarchy of indicators used to assess the sustainability of sustainable SMEs by considering the integration aspects of Profit (economic), People (social), Planet (environmental), Phenotechnology, and Prophet (Spiritual) using the AHP method. The research method used in this study is a qualitative method with descriptive analysis, which is then processed to obtain a systematic conclusion. The AHP method is used to help develop a priority from various options using multi-criteria. The consistency test carried out on the criteria weighting showed a CI value of less than 0.01, meaning the criteria hierarchy is considered entirely consistent.

Keywords: Sustainability, SMEs, AHP.

1. INTRODUCTION

Indonesia is a country rich in food and agriculture, where food processing is carried out by large, medium-sized companies and Small and Medium Enterprises (SMEs) [3]. The food sector is a human effort to manage agroecosystems with the help of technology, capital, labor, and management to achieve food sovereignty and security [8]. From the quality aspect, SME products are considered inconsistent where over time, the product quality tends to decrease in terms of taste or product size [18]. According to [5], product continuity concerns SMEs' ability to meet market demand continuously. To fulfill this aspect, in general, SMEs are constrained by capital. This causes the products produced by SMEs to be low in competitiveness in the market. In facing competition in the industrial world, Indonesia must be ready and competitive. Therefore efforts in planning, implementing, organizing, and controlling companies or businesses [31]. Therefore, small and Medium Enterprises (SMEs) need to be improved to achieve their goals and increase their competitiveness [11]. The primary distinguishing feature between companies and Small and Medium Enterprises (SMEs) is their production system, which is more specifically in the production process [15].

Globalization is a phenomenon that encourages companies at the micro-economic level to increase efficiency in order to be able to compete at local, national, and international levels. According to [34] SMEs must have managerial skills and know strategic selling techniques starting from the knowledge of products, product characteristics, and product competitiveness against similar products. Behind the reasonably good contribution of SMEs to the national economy, it turns out that this sector still has myriad fundamental problems. SMEs are still weak in business management capabilities, the quality of human resources (HR) is still limited, as well as weak access to financial institutions, especially banking [1]. This is done so that SMEs can market each product that is produced correctly, and the products that have been produced can survive even though they are in intense competition [37].

Sustainability is a concept that is applied within the company so that a company can achieve long-term sustainability in its business [14].

There are five aspects of sustainability, namely economic, environmental, social, phenotechnology, and spiritual. These five aspects are fundamental things that companies including SMEs must achieve in order to achieve sustainability targets. [25] [19] Sustainability variables include:

- a. **Profit** aspect (economics, profit), is the most important element and becomes the main goal of every business activity, and profit itself is essentially an additional income that can be used to ensure the survival of the company.
- b. **People** aspect (social, stakeholder community) is an aspect that affects the condition of the community in the midst of a sustainable industry. Consequently, the community is an important stakeholder for the company, because the support of the community, especially the surrounding community, ensures the existence of the company and provides great benefits to the community.
- c. **Planet** aspects (environment) are aspects related to all fields in human life and all activities carried out by humans as living beings which are always related to the environment.
- d. **Phenotechnology** (information technology) aspect is the fact that the existence or phenomenon of information technology must be an important part of maintaining the company's survival.
- e. **Prophet** (spiritual) aspect is spiritual, mental, or spiritual balance in the process of preserving organizational life. As a model of intrinsic character education that can overcome corrupt behaviour. The Prophet is based on an autonomous human spiritual (intrinsic) awareness obtained from *taqarrub* (approach to Gods)

According to [10] [2] data from the Ministry of Industry of the Republic of Indonesia in 2020, during the Covid-19 pandemic, SMEs experienced a decline in demand for the products produced by up to 90%, whereas in the year before the Covid-19 pandemic 97% of all sales activities were carried out offline. This impact also affects the achievement of sustainability for SMEs which consists of aspects of profit, planet, people, phenotechnology, and prophet [19]. Some SMEs are not able to meet their performance targets in terms of sustainability. From the economic side, there are problems such as increasing production costs, labour, and raw materials [36]. From the environmental side, for example, an environmentally sound system is required to be able to maintain the stability of resources and avoid exploitation of natural resources and environmental functions. According to [7], while on the social side, it has an impact on the welfare of the workers involved in SMEs, directly there are fundamental changes, especially for SME workers during the Covid-19 pandemic, especially in terms of employee welfare [8]. Based on the problems that have been described, a research analysis of the impact of the Covid-19 pandemic on sustainability will be carried out on SMEs using the Analytical Hierarchy Process (AHP) method [33]. The aim of the research is to develop a hierarchy of indicators used to assess the sustainability of sustainable SMEs by considering the integration aspects of Profit (financial), People (Social), Planet (Environmental), Phenotechnology, and Prophet (Spiritual) using the AHP method. With the AHP method, priority factors that affect the sustainability aspect will be obtained so that SMEs cannot achieve the sustainability targets that have been set. From the results of the analysis based on the AHP method, a proposed policy formulation in the form of a sustainability policy can be made by SMEs to achieve sustainability aspects, especially those affected by the Covid-19 pandemic.

2. LITERATURE REVIEW

2.1 Small-medium Enterprises (SMEs)

According to (Peraturan Menteri Perindustrian Republik Indonesia No : 11/M-IND/PER/3/2014, 2014) Regarding the Technical Guidelines for the Restructuring of Machinery and/or Equipment for Small and Medium Enterprises Article 1 paragraph (1), (2), and (3) which mentions [26]:

1. Small and Medium Enterprise (SME) is a small industrial company and a medium industrial company.
2. Small Industrial Company (SE) is an industrial company with a total investment value of up to Rp. 500,000,000 (five hundred million Rupiah), excluding land and buildings for business premises.
3. Small and Medium Industrial Company (SME) is an industrial company with a total investment value greater than Rp. 500,000,000 (five hundred million Rupiah) up to a maximum of 10,000,000,000 (ten billion Rupiah), excluding land and buildings for business premises.

Technology has become a new paradigm to determine the quality and competitiveness of a nation. Technology has a relationship with industrialization, which has become a benchmark for economic growth that reflects the success of a nation's development [13]. According to (Republik Indonesia, 2004) regarding Industry, it is explained that small industry is an economic activity consisting of processing raw materials, raw materials, semi-finished goods, and or finished goods into goods that have a higher value for use [30]

2.2. Defining Analytical Hierarchy Process (AHP)

The Analytical Hierarchy Process (AHP) was developed by Dr Thomas L. Saaty of the Wharton School of Business in the 1970s to organize information and judgement in choosing the most preferred alternative. Comparisons are made based on the "judgement" of the decision-maker by assessing

the level of importance of an element compared to other elements. Below is a quantitative scale determination from one to nine to assess the comparison of the importance of an element to other elements [32]. The Analytical Hierarchy Process is used as a problem-solving method compared to other methods for the following reasons [23] :

1. A hierarchical structure, as a consequence of the selected criteria, to the deepest sub-criteria.
2. Taking into account the validity up to the inconsistency tolerance limit as the criteria and alternatives chosen by the decision maker. Taking into account the durability of the decision-making sensitivity analysis output.

2.3. Sustainability

Sustainability is very multifaceted and the originality of sustainability is very complex [4]. [6] Sustainability can be a strategic resource that leads to competitive advantage, and in turn, superior organizational performance. While most of the sustainability studies look at all three aspects of the triple bottom line, some literature shows inconclusive results when strategies aim to address all three sustainability approaches together [33]. Business sustainability is most often presented in an integrated manner, combining all three aspects, as some of them overlap. Graphically, this can be represented by three overlapping circles, where the intersection in the middle represents continuity [35]. SME actors try to implement corporate sustainability by complying with policies and regulations [40]. SMEs strive to achieve sustainability by adopting lean manufacturing, green manufacturing and other sustainability practices. Sustainability practice is any practice that aims to achieve or support sustainable value [16]. Sustainability performance can be defined as company performance in all dimensions and for all drivers of company sustainability [21] .

3. RESEARCH METHOD

The research method used in this study is a mixed method with descriptive analysis and then processed in order to obtain a systematic conclusion. This case study research is related to the sustainability of SME which was carried out within the scope of Malang City, East Java province. In determining the model for appropriate criteria in sustainable manufacturing which is influenced by aspects such as Profit (financial) and People (Social), sustainable manufacturing which is influenced by these 5 aspects are integrated in the Analytical Hierarchy Process (AHP) method to develop a strategy for determining the criteria for sustainable manufacturing in food SMEs. Specifically, Tempe products need to be supported in increasing business and competitiveness in Malang City.

4. RESULTS AND DISCUSSION

In this subchapter, data processing based on the level of importance will be discussed. The results of the questionnaires that the respondents have filled out are then processed using AHP to determine the level of importance of each criterion and alternatives consisting of several indicators.

Determination of Decision Making Objectives based on AHP. The following is decision-making to determine the level of importance of each criterion. The following image shows the objectives, criteria, and indicators for the alternatives In this sub-chapter, the variables and alternatives used in making the AHP questionnaire given to respondents will be discussed. It can be seen from table 1 the indicators that will be used in the study. The following are indicators for each factor that can be used at a later stage:

Table 1. Indicators Used in the Study

Factor	Indicator
<i>Profit</i>	Economic performance
	Infrastructure
	Anti-Corruption
	Tax
<i>Planet</i>	Materials
	Water
	Compliance with Environmental Regulations
<i>People</i>	Staffing
	Management Relations with Employees
	Anti-Discrimination

	Diversity and Equal Opportunity Freedom to associate Indigenous people's rights Human rights Local community rights Customers' health and safety Marketing and labeling Socioeconomic compliance
<i>Phenotechnology</i>	<i>E - Commerce</i> Hardware Software
<i>Prophet</i>	Honesty Humanity Sincerity

Source: Author's processed data 2022

4.1. Indicator clusters for Profit factor (Economy)

In this cluster, there are 4 indicators that will be compared, in the pairwise comparison table. The following is a pairwise comparison table for indicators on Profit / Economic factors.

Table 2. Pairwise Comparison for Profit

	Economic Performance	Infrastructure	Anti Corruption	Tax
Economic performance	1	2	3	3
Infrastructure		1	3	2
Anti-corruption			1	2
Tax				1

Source: Author's primary data, 2022

Next, the average of each indicator is calculated horizontally which will be defined as the weight of each indicator if it passes the consistency test. The calculation of the average indicator is as follow

Table 3. Economic Weight Calculation

	Economic Performance	Infrastructure	Anti Corruption	Tax	Average
Economic performance	0.46153	0.52174	0.4	0.375	0.43956
Infrastructure	0.23077	0.26087	0.4	0.25	0.28541
Anti-corruption	0,15383	0,08694	0.1333	0.25	0.15601
Tax	0.15383	0.13043	0.0666	0.125	0.11896

Source: Author's primary data, 2022

The average generated in table 3 above is a value that will later be used as a weight for each indicator if the assessment has passed the consistency test.

Based on these calculations, it is found that the max lambda value is 4.144961. Next, the consistency index value is calculated as follows:

$$CI = \frac{4.144961 - 4}{4 - 1} = 0.04832$$

The Consistency Index value is then used to calculate the Consistency Ratio value by dividing the consistency index value by the random consistency index value as follows:

$$CR = \frac{0.04832}{0.9} = 0.053689$$

Thus, it can be stated that the assessment is considered consistent because the consistency ratio is less than 10% so that the average value can be considered as a weight for each indicator on the Profit / Economy factor.

4.2. Indicator clusters for Planet factor (Environment)

In this cluster, there are 3 indicators to be compared in the pairwise comparison table. The following is a pairwise comparison table for indicators on Planet (Environmental) factors.

Table 4. Pairwise Comparison for Planet

	Materials	Water	Environmental Regulations
Materials	1	2	3
Water		1	2
Environmental Regulations			1

Source: Author's primary data, 2022

Next, the mean of each indicator is calculated horizontally which will be defined as the weight of each indicator if it passes the consistency test. The calculation of the average indicator is as follows:

Table 5. Planetary/Environmental Weight Calculation

	Materials	Water	Environmental Regulations	Average
Materials	0.545455	0.571429	0.5	0.53895
Water	0.272727	0.285714	0.333333	0.29725
Environmental Regulation	0.181818	0.142857	0.166666	0.16378

Source: Author's primary data, 2022

The average produced in table 5 is a value that will be used as a weight for each indicator if the assessment has passed the consistency test. Based on these calculations, it is found that the max lambda value is 3.0092. Next, the consistency index value is calculated as follows:

$$CI = \frac{3.0092 - 3}{3 - 1} = 0.0046$$

The Consistency Index value is then used to calculate the Consistency Ratio value by dividing the consistency index value by the random consistency index value as follows:

$$CR = \frac{0.0046}{0.58} = 0.007931$$

Thus, it can be stated that the assessment is considered consistent because the consistency ratio is less than 10% so that the average value can be considered as a weight for each indicator on Planetary/Environmental factors.

4.3. Indicator clusters for People factor (Social)

In this cluster, there are 11 indicators to be compared. Some indicators have names that are long enough. So, to make reading easier, the pairwise comparison table will be written in letter notation accompanied by a list of indicator names for each of the letter notations. The following is a pairwise comparison table for indicators on social factors:

Table 6. Pairwise Comparison People / Social

	A	B	C	D	E	F	G	H	I	J	K
A	1	1	0.33333	1	0.3333	1	0.33333	0.33333	3	0.2	3
B		1	1	1	1	3	0.33333	3	3	0.2	3
C			1	1	1	3	0.33333	3	3	0.2	3
D				1	3	3	0.2	3	3	0.2	3
E					1	3	0.2	3	5	0.2	3
F						1	0.2	1	3	0.33333	3
G							1	5	5	1	5
H								1	3	0.33333	3
I									1	0.33333	3
J										1	3
K											1

Author's primary data, 2022

Notes:

- A. Staffing
- B. Management relations with employees
- C. Anti-discrimination
- D. Diversity and Equal Opportunity
- E. Freedom to associate
- F. Indigenous people's rights
- G. Human rights
- H. Local community rights
- I. Customers' health and safety
- J. Marketing and Labelling
- K. Socioeconomic compliance

Next, the average of each indicator is calculated horizontally which will be defined as the weight of each indicator if it passes the consistency test. The calculation of the average indicator is as follows:

Table 7. People / Social Weight Calculation

	A	B	C	D	E	F	G	H	I	J	K	Average
A	0,0461	0,0697	0,0256	0,0638	0,0192	0,0422	0,0793	0,0144	0,0927	0,0461	0,9090	0.053492
B	0,0461	0,0697	0,0769	0,0638	0,0576	0,1267	0,0793	0,1304	0,0927	0,0461	0,9090	0.0794
C	0,1384	0,0697	0,0769	0,0638	0,0576	0,1267	0,0793	0,1304	0,0927	0,0461	0,9090	0.097179
D	0,0461	0,0697	0,0769	0,0638	0,1730	0,1267	0,0476	0,1304	0,0927	0,0461	0,9090	0.085902
E	0,1384	0,0697	0,0256	0,0212	0,0576	0,1267	0,0476	0,1304	0,1546	0,0461	0,9090	0.082078
F	0,0461	0,0232	0,0256	0,0212	0,0192	0,0422	0,0476	0,0434	0,0927	0,0769	0,9090	0.047942
G	0,1384	0,2142	0,2307	0,3191	0,2884	0,2112	0,2381	0,2174	0,1546	0,2307	0,1515	0.214303
H	0,1384	0,0232	0,0256	0,0212	0,0192	0,0422	0,0476	0,0434	0,0927	0,0769	0,9090	0.056333
I	0,0153	0,0232	0,0256	0,0212	0,0115	0,0140	0,0476	0,0144	0,0309	0,0769	0,9090	0.033705
J	0,2307	0,3488	0,3846	0,3191	0,2884	0,1267	0,2381	0,1304	0,0927	0,2307	0,9090	0.222645
K	0,0153	0,0232	0,0256	0,0212	0,0192	0,0140	0,0476	0,0144	0,0103	0,0769	0,0303	0.026941

Source: (Author's primary data, 2022)

The average generated in Table 7 is a value that will later be used as a weight for each indicator if the assessment has passed the consistency test. Based on Table 8 calculation, it is found that the max lambda value is 12,492. Next, the consistency index value is calculated as follows:

$$CI = \frac{12.492 - 11}{11 - 1} = 0.1492$$

The Consistency Index value is then used to calculate the Consistency Ratio value by dividing the consistency index value by the random consistency index value as follows:

$$CR = \frac{0,1492}{1.51} = 0.0988$$

Thus, it can be stated that the assessment is considered consistent because the consistency ratio is less than 10%, so the average value can be considered as a weight for each indicator on the people / social factor.

4.4. Indicator clusters for Phenotechnology

In this cluster, there are 3 indicators to be compared in the pairwise comparison table. The following is a pairwise comparison table for indicators on the Phenotechnology factor:

Table 8. Pairwise Comparison for Phenotechnology

	<i>E- Commerce</i>	Hardware	Software
<i>E - Commerce</i>	1	2	3
Hardware		1	2
Software			1

Source: Author's primary data, 2022

Next, the average of each indicator is calculated horizontally which will be defined as the weight of each indicator if it passes the

consistency test. The calculation of the average indicator is as follows

Table 9. Phenotechnology weight calculation

	<i>E - Commerce</i>	Hardware	Software	Average
<i>E - Commerce</i>	0.545455	0.571429	0.5	1.61688
Hardware	0,272727	0.285714	0.333333	0.89177
Software	0,181818	0.142857	0.166666	0.49134

Source: Author's primary data, 2022

The average generated in table 9 is a value that will later be used as a weight for each indicator if the assessment has passed the consistency test.

Based on these calculations, it is found that the max lambda value is 3.0092. Next, the consistency index value is calculated as follows:

$$CI = \frac{3.0092 - 3}{3 - 1} = 0.0046$$

The Consistency Index value is then used to calculate the Consistency Ratio value by dividing the consistency index value by the random consistency index value as follows:

$$CR = \frac{0.0046}{0.58} = 0.007931$$

Thus, it can be stated that the assessment is considered consistent because the consistency ratio is less than 10%. So, the average value can be considered as a weight for each indicator on the Phenotechnology factor.

4.5. Indicator clusters for Prophet factor (Spiritual)

In this cluster, there are 3 indicators to be compared in the pairwise comparison table. The following is a pairwise comparison table for indicators on the Prophet (Spiritual) factor:

Table 10. Pairwise Comparison for Prophet (Spiritual)

	Honesty	Humanity	Sincerity
Honesty	1	2	1
Humanity		1	1
Sincerity			1

Source: Author's primary data, 2022

Next, the average of each indicator is calculated horizontally which will be defined as the weight of each indicator if it passes the consistency test. The calculation of the average indicator is as follows :

Table 11. Prophet weight calculation

	Honesty	Humanity	Sincerity	Average
Honesty	0,4	0,5	0,33333	0.41111
Humanity	0,2	0,25	0,33333	0,26111
Sincerity	0,4	0,25	0,33333	0.32777

Source: Author's primary data, 2022

The average generated in table 11 is a value that will later be used as a weight for each indicator if the assessment has passed the consistency test.

Based on these calculations, it is found that the max lambda value is 3.05366. Next, the consistency index value is calculated as follows:

$$CI = \frac{3.05366 - 3}{3 - 1} = 0.02683$$

The Consistency Index value is then used to calculate the Consistency Ratio value by dividing the consistency index value by the random consistency index value as follows:

$$CR = \frac{0.0268}{0.58} = 0.04626$$

Thus, it can be stated that the assessment is considered consistent because the consistency ratio is less than 10%. So, the average value can be considered as a weight for each indicator on the Prophet / Spiritual factor.

4.6. Indicator clusters for Pentuple Bottom Line

Table 12. Pairwise Comparison for Pentuple Bottom Line

	<i>Profit</i>	<i>Planet</i>	<i>People</i>	<i>Phenotechnology</i>	<i>Prophet</i>
<i>Profit</i>	1	2	1	2	1
<i>Planet</i>		1	2	1	2
<i>People</i>		1	2	1	1
<i>Phenotechnology</i>			1	2	1
<i>Prophet</i>					1

Source: Author's primary data, 2022

Next, the average of each indicator is calculated horizontally which will be defined as the weight of each indicator if it passes the consistency test. The calculation of the average indicator is as follows:

Table 13. Pentuple Bottom Line weight calculation

	<i>Profit</i>	<i>Planet</i>	<i>People</i>	<i>Phenotechnology</i>	<i>Prophet</i>	Average
<i>Profit</i>	0,1818	0,4	0.1538	0.2857	0.1666	0.23758
<i>Planet</i>	0.0909	0.2	0.3076	0.1428	0.3333	0.21492
<i>People</i>	0.1818	0.2	0.3076	0.1428	0.1666	0.19977
<i>Phenotechnology</i>	0.1818	0.1	0.1538	0.2857	0.1666	0.17759
<i>Prophet</i>	0.3636	0.1	0.0769	0.1428	0.1666	0.16998

Source: Author's primary data, 2022

The average generated in the table above is a value that will later be used as a weight for each indicator if the assessment has passed the consistency test. The overall assessment simulation from the three SMEs involved can be concluded that the SMEs has the highest level of sustainability to the lowest. The following is a ranking of the final value or level of sustainability of each SME from the largest to the smallest:

Table 14. SMEs sustainability ranking

No.	SMEs name	Sustainability level
1.	Tempe Chips	86,7045
2.	Tempe Mendohan	83.7579
3.	Stik Tempe Mendohan	79.7921

Source: Author's primary data, 2022

The level of sustainability of an SME represents how the SME can maintain its sustainability, both from Profit/Economy, Planet/Environment, People/Social, Phenotechnology, and Prophet/Spiritual factors. However, each of these factors certainly has a different level of influence and therefore it is necessary to weigh it not only at the indicator level but also at the factor level.

5. CONCLUSION

The final results of the AHP analysis and screening of indicators were carried out using a questionnaire method guided by interviews. The calculation of the average weight of the indicators is as follows: Profit 0.23785, Planet/environment 0.21492, People/social 0.19977, Phenotechnology 0.17759, and Prophet/spiritual 0.16998.

The results of the assessment simulation to test the function of the measuring instrument that has been produced to assess the SMEs 'sustainability by considering aspects of Profit, Planet, People, Phenotechnology, and Spiritual with the Analytical Hierarchy Process (AHP) method, that SME keripik tempeh final value and level of sustainability 86, 7045. The final result of the Mendohan tempeh SMEs assessment and the level of sustainability was 83.7579, and the final result of the Mendohan tempeh sticks SMEs assessment and the sustainability level of 79.7921. The level of sustainability of *keripik* tempe has a high final value because the value of high economic factors tends to have a high level of sustainability.

The consistency test that was carried out on the weighting of the criteria showed a CI value of less than 0.01, which means the hierarchy of criteria is considered quite consistent. Consistency test for alternatives on each criterion based on weighting shows the CI value is less than 0.01 which means the alternative hierarchy for social, environmental, and economic criteria is considered quite consistent. Based on the results of the weighting of interests, input can be given to the government as well as to SME actors related to policy making and business strategies in dealing with the Covid-19 pandemic, especially on social criteria, namely health and safety, environmental criteria, namely reducing energy use, and economic criteria, which is profit.

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SUSTAINABILITY FRAMEWORK IN HIGHER EDUCATION INSTITUTION: AGENDA FOR FUTURE RESEARCH

Hisky Ryan Kawulur

ABSTRACT

The purpose of this study is to map and propose future research directions concerning the Sustainability Framework in Higher Education Institutions. In this study, a literature review was conducted by examining four themes: general issues, methods, the basic framework, and dimensions. The researchers came to the following conclusions: first, the issue of sustainability in higher education as a whole is still in the development stage; second, qualitative methods are frequently used in the process of developing the framework; third, the Global Reporting Initiative (GRI) is the most cited basic framework; and fourth, many researchers have modified the sustainability dimension according to the context of their university. This research contributes to the literature on sustainability by providing a summary of common themes regarding the issue.

**SUSTAINABLE DEVELOPMENT POLICY OF GREEN TRANSPORTATION
SYSTEM TO SUPPORT GREEN CAMPUS PROGRAM
AT POLITEKNIK NEGERI MALANG**

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ABSTRACT

The rapid development of science and technology will affect in various fields of human life, one of them is environmental damage. The world of education, including the State Polytechnic of Malang (Polinema) must care about the environment by implementing a green campus concept policy. During weekdays campus residents are active and carry out mobility for a full day in the campus environment. One of the main supporters of mobility in the campus environment that supports the green campus program is the green transportation system. To support the performance of the implementation of the campus's internal green transportation system, infrastructure and mobility factors are important. The objectives of this research are to: (1) develop a green transportation system that supports mobility and supports the concept of a green campus at the main campus of Polinema; and (2) develop infrastructure supporting the green transportation program. This research will be carried out with a research and development design with a qualitative approach. This approach is considered very appropriate because it relates to the general purpose of research. Based on the results of identification in the field, the internal green transportation system of the Polinema main campus has been partially implemented in the form of physical elements. The available internal green transportation infrastructure of the Polinema main campus is roads, walkways/corridors for pedestrians, parking areas for motorized vehicles and electric bicycles as well as means of transportation in the form of electric bicycles. Even though means of green transportation and infrastructure are available on the main campus of Polinema, they still need to be further developed in order to better support the mobility, security and comfort of all campus residents. The results of the study are as follows: (1) Sustainable development policy of a green transportation system in order to support mobility and the green campus program is implemented in the form of developing a green transportation system on campus in the form of e-bike sharing by utilizing rooftop solar energy as an energy source for electric bicycles, and (2) develop the function of electric bicycle parking facilities into a charging station for electric bicycles, in order to improve the performance of green transportation programs and green campuses to be better based on the UI Green Metric criteria and indicators.

Keywords: *Sustainable Development Policy, Green Campus, Green Transportation, E-bike sharing, Polinema.*

Sustainable Financial Values and Rural Bank Risk Mitigation: An Experimental Study

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Rural Credit Banks (hereinafter referred to as BPR) are managed in the same way as Banks in general but have a unique character. The purpose of this study is to analyze the various organizational units interact and relate to each other, and how risks are managed in an integrated and comprehensive manner from simple actions to reduce risk to sustainable risk management in the form of risk optimization without must harm the company. The study uses experiments to support testing of the proposed hypothesis. The results of the study have confirmed every hypothesis proposed by the researcher. The study looked at 33 subjects, as many as 18 into two groups. Group A was a group of subjects who were not given sustainable financial value treatment, while group B was a group of subjects who were given sustainable financial value treatment.

Key Words: Sustainable Finance, Risk Management, Rural Credit Banks
JEL: DO2, D81, G21

Introduction

Sustainable finance is a new paradigm given by financial institution authorities today as an implementation of sustainable development goals. Sustainability is the fulfillment of current human needs without compromising the ability to meet the needs of future generations (Hahn & Figge, 2011; Alshehhi et al., 2018). This concept seems very ideal but can be blocked by a comfort zone wall that always considers profit as the bottom line. It seems that the counter explanation way of thinking in the form of regret at the beginning might be able to reduce the growing skepticism. This is a descriptive issue and will become a joint convention if it becomes an obligation. Awareness and volunteerism have more meaning and leverage but are again hampered by the natural human moral hazard in humans. The strategy to become a company that is responsible and cares about environmental and social aspects is a must to maintain success in the future (Busse, 2016; Chernev & Blair, 2015).

The era of globalization can be a trigger factor for the emergence of new problems and challenges in the development process which then gave birth to several concepts and approaches in measuring development success. One important indicator in the success of development is the existence of economic equality that can be observed by all levels of society. While the failure of development can be translated into whether or not the economic conditions are even, so that it can cause economic inequality and community backwardness. These conditions, coupled with the existence of a new phenomenon namely climate change which certainly has an impact on energy and food security in the midst of population growth, especially in developing countries. Several studies reveal the relationship between environmental and economic performance (Weber, 2011; Schaltegger & Figge, 2000) or financial performance (Benson et al., 2006; Gil-Bazo et al., 2008; Elsayed & Paton, 2009). These recent natural disasters indicate and are thought to be caused intentionally or unintentionally by imbalance of the landscape. Landscapes are not just social constructs but are operated variables in the universe. Deliberation can be in the form of exploitation of nature to maximize utility or the occurrence of behavior that damages nature, even though the essence of sustainable development is the occurrence of production and consumption processes that are able to meet human welfare continuously, year after year and continue from generation to

generation. The articulation of life is a sign that the earth we are walking on is not a legacy but is entrusted to the next generation. Sustainable Finance promotes new services and products to meet customer desires as an implementation of sustainable performance (Weber, 2014; Al-Qudah et al., 2022).

Banks and financial institutions are indirectly strongly influenced by environmental risks and the sustainability of their clients. Banks and financial institutions must integrate risks into the risk management process (Weber, 2011). Some cases of negative financial impact for banks related to their client's environment that integrate sustainability risk into financial risk management (Weber et al., 2010). Furthermore, the responsibilities of lenders or lenders for borrower has negative influence on banks reputation and financial institutions (Hirigoyen & Poulain-Rehm, 2015).

Increasingly fierce business competition and increasingly complex business activities certainly increase the risk potentialy, especially BPRs. Risk management application is one of BPR's efforts to strengthen institutions and improve the reputation of BPR itself. Supervision of risk, for example credit risk is an important dimension in assessing the health of a financial institution including the Rural Bank (BPR). Every person or community who places their funds or wealth in a place, including BPR, always has a question as to whether the funds and assets they place are safe. The question arises because of concerns that the funds and wealth are at risk, ranging from the risk of impairment to the risk of fraud. BPRs, like all other forms of business, are also not free from risk.

Concern for the financial services industry on environmental and social issues is a necessity and no longer something done to comply with regulations alone. The main implications that need attention are: first, Ignorance of environmental and social issues will increase financing risks, especially credit risk. Second, attention to social issues is a competitive advantage for companies, so the company has the potential to grow even bigger. Third, more broadly, by promoting sustainable financing, the financial services industry will contribute positively to economic development through financing environmentally friendly and social projects. Management and credit practices in small and medium enterprises (SMEs) that are difficult to assess with respect to their credit status. The problem that often becomes a question is whether or not adding additional criteria aimed at assessing the creditor environment, sustainability, practices on credit rating criteria by increasing the ability to rank risk (Weber et al., 2008).

A positive relationship between financial performance and the environment is expressed through several studies (Pope et al., 2004; Dasgupta et al., 2002; Nakao et al., 2007). Previous studies have been carried out to determine the effects of financial and environmental performance (Bansal & Roth, 2000; Reinhardt, 2008). Whereas the other empirical studies do not show a clear positive relationship between sustainability performance and financial performance (Margolis & Walsh, 2003). The difference in research results is due to various concepts of sustainability within the company (Barnett & Salomon, 2006) such as: corporate reputation, membership in the code of ethics (Cowton & Thompson, 2000), stakeholders, social and environmental performance, policies and long-term success.

At the other side, if the risk occurs, in the end the people who will be harmed are the BPR customers. For this reason, BPRs as a legal entity need to manage risk well. In other words, BPRs also need risk management. Each BPR management needs to understand how to identify risks, sort out risks and mitigate risks, and take steps to control risk for the accepted risk profile.

Hypothesis Development

H₁: Employees of Rural Bank (BPR) who implement sustainable financial values and local cultural values can better manage BPR risk compared to BPR employees who do not have to implement local cultural values Catur Purusha Artha (B > A)

Information:

A = Base Line Condition or No Manipulation Condition

B = Condition with the Essence of Sustainable Financial Value

Research Method

Experimental Design

The study uses experiments to support testing of the proposed hypothesis. Manipulation of the independent variable is simply done by assigning a different value charge to the independent variable to see the impact of the absence and presence of a sustainable and cultural financial charge on the dependent variable, namely BPR risk assessment. This manipulation is expected to prove the level of causal influence.

The experiment has a factorial design between subject 1x1, with independent variables: BPR employees without the essence of sustainable finance and BPR employees with sustainable financial essence, with the dependent variable in the form of BPR risk assessment.

Table 1. Factorial Between Subject Experiment Design

	Rural Banks without the essence of sustainable finance	Rural banks with the essence of sustainable finance
BPR Risk Assessment	A	B

Experiment Subjects

The experimental subjects in this study were BPR employees in Badung Regency who in their work environment faced possible risks.

Research Variables and Experimental Conditions

The independent variables used in the study are categorical, namely (1) BPR employees without the essence of sustainable finance and (2) BPR employees with sustainable financial essence. The continuous variable that is the BPR risk assessment (dependent variable).

Results and Discussion

Research data

Samples that have been obtained by researchers up to the time of this report are 33 subjects, namely 18 subjects in group A and 15 subjects in group B. Group A is the group of subjects who are not treated with sustainable financial value, while group B is the subject group who are given continuous financial value treatment. BPRs that have agreed to become subjects in this study are BPR Gisawa, BPR Kusuma Mandala, and BPR Karya Sari Sedana.

Table 2. Number of Respondents in Each Group

Treatment group	Number of Respondents
A	18
B	15
Total	33

Descriptive Statistics Results

Statistics of descriptive present the number of observations, minimum values, maximum values, mean values, and standard deviations. To measure the central value of the data distribution can be done by measuring the mean while the standard deviation is the difference in the value of the studied data with the average value.

Table 3. Descriptive Statistics Results

Variable (<i>Treatment</i>)	N	Min.	Max.	Mean	Std. Deviasi
A	18	20	90	62,22	20,16
B	15	20	80	40	15,12

1. Variant Homogeneity Test Results

Homogeneity variance test used to find out some population variants are the same or not. This test is performed as a prerequisite in the analysis of independent sample t test and ANOVA. From Table 5 it can be seen that the level of significance of the data group is 0.149*. The significance value in all data groups is more than 0.05 so it can be concluded that all of the data groups in this study have the same variant. The Statistics shows that the smaller the value, the greater of homogeneity.

Table 4. Variant Homogeneity Test Results

Description	<i>Levene Statistic</i>	<i>Sig.</i>
Hypothesis 1	2,186	0,149*

2. Hypothesis Test Results

Hypotheses tested using the ANOVA method to determine the significance of the mean difference (μ) between one sample group and another.

Table 5. Hypothesis Test Results

Descriptions	<i>Variance</i>	df	<i>Mean Square</i>	F	<i>Sig.</i>
Hypothesis 1	<i>Between groups</i>	1	4040,40	12,388	0,001*
	<i>Within groups</i>	24	326,17		

Hypothesis 1 was tested to determine the existence of a significant average difference between conditions without manipulation (A) with conditions in the presence of essence or sustainable financial value (B). Hypothesis 1 test results show a p-value of 0.001* (<0.05) so that H_1 is accepted. This value indicates that there are differences in the average risk assessment by BPR employees who do not have a sustainable financial value compared to the risk assessment by BPR employees who implement sustainable financial values.

Discussion of Research Results

Simple manipulation of the independent variable has been carried out by researchers by providing a treatment of the charge of sustainable financial values on the independent variable to see the impact of the absence or presence of an element of sustainable financial value on the dependent variable, namely BPR risk assessment. The results of researchers' testing of proposed hypotheses provide an indication that ongoing financial value interactions contribute to BPR risk assessments by employees. The existence of an ongoing financial element reduces the risk rating of a BPR compared to the absence of a sustainable financial element in the risk assessment process. These findings are in line with Weber (2011), Schaltegger & Figge, (2000), Elsayed & Paton, (2009) and Carlucci et al (2018) and are in accordance with local culture which is based on chess purusa artha, namely dharma, artha, kama and moksha. BPRs that provide financing for environmentally responsible projects are not only pursuing profit but also part of their moral responsibility to safeguard future life. BPR's greater sensitivity to environmental issues prevents the creation of a negative reputation associated with debtors who cause environmental damage.

Descriptive statistical results show that the mean value of BPR risk assessment by group B, namely the condition of BPR employees with continuous financial value treatment has a lower mean value compared to the mean variable value without treatment. This indicates that the existence of sustainable financial value affects the low risk that will be faced by BPRs. The research with the field experiment method for BPR employees in Badung regency produced a conclusion that there is an ongoing financial value interaction in BPR risk assessment by BPR employees.

Conclusions and Suggestions

Conclusions

The results of the study have confirmed every hypothesis proposed by the researcher. The study looked at 33 subjects, as many as 18 subjects in group A and 15 subjects in group B. Group A was a group of subjects who were not given sustainable financial value treatment, while group B was a group of subjects who were given sustainable financial value treatment.

Hypothesis 1 shows a p-value = 0.001 (<0.05) so that H1 is accepted. This value indicates that there are differences in the average risk assessment by BPR employees who do not have a sustainable financial value compared to the risk assessment by BPR employees who implement sustainable financial values. Hypothesis test results proved to show the existence of an ongoing financial value interaction with risk assessment by BPR employees. The mean value of BPR risk assessment by group B, namely the condition of BPR employees with continuous financial value treatment has a lower mean value compared to the variable mean value without treatment. This indicates that the existence of sustainable financial value affects the low risk that will be faced by BPRs.

Suggestion

This research is limited to the value of sustainable finance in three BPRs in Bali so that suggestions that can be given to further researchers are to expand the scope of the research so that they can get respondents from BPRs in each Regency in Bali Province. This is to get a broader picture of the risk assessment and value of sustainable finance in each of these districts. Furthermore, further research can include other variables that are considered to affect employee risk assessment, or apply research concepts to relevant research subjects.

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**Sustainable Governance of Village-Owned Enterprise:
Toward Village Sustainable Development Goals**

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ABSTRACT

Purpose — *This paper aims to formulate sustainable governance of Village-Owned Enterprise (VOE) in realizing Village Sustainable Development Goals (SDGs).*

Design/methodology/approach — *This study site was VOE Panggung Lestari in Panggungharjo Village, Sewon District, Bantul Regency, Yogyakarta Province, Indonesia. VOE Panggung Lestari is one of the best VOE in Indonesia and won an international award in 2019. In-depth interviews were held with the informants: the headman of the village as advisor of VOE, the director and vice director of VOE, the Unit Business Manager of VOE, and the Village Council. Data collection was conducted through direct observation and documentation as well. Ethnomethodology was used to analyze hidden concepts as the basis for the practice of everyday life in Panggungharjo Village, through indexicality and reflexivity techniques.*

Findings — *The concept of sustainable governance includes a business method in managing finance, human resources, and institution; balancing between efficiency and social safety net; public participation; accountability; transparency; innovation; income generating; while maintaining local values such as mutual cooperation, harmony, honesty, trustworthiness, and serving. Furthermore, Village SDG is unique because it has 18 goals. The 18th goal is dynamic village institutions and adaptive village culture. VOE Panggung Lestari has four business units that support Village SDGs. Kampong Mataraman business unit: SDGs 5, 8, and 18; Waste Management Business Group: SDGs 7, 13, and 15; Pasardesa.id platform business unit: SDGs 8, 10, and 17; The Ratan business unit: SDGs 5, 17, and 18.*

Practical implications — *VOE must run its business not only in business methods but also maintain social values because of VOE's characteristics as a social enterprise.*

Originality/value — *This paper demonstrates the concept of sustainable governance of VOE in a developing country, namely Indonesia. It is hoped that this concept will accelerate the achievement of the SDGs in general and the Village SDGs in particular towards a prosperous society.*

Keywords — *Sustainable governance, Village-Owned Enterprise, Village SDGs*

Paper type — *Research paper*

SUSTAINABLE INNOVATION BASED ON SUSTAINABLE VALUE FRAMEWORK TOWARDS BUSINESS SUSTAINABILITY: AN OVERVIEW

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Abstract

Innovation plays an essential role in the pace and achievement of sustainable development. In developing the conceptual framework of the business model, innovation can be effectively designed and developed. The importance of innovation in refreshing products and services, updating the organization, and even ensuring the company's survival. Sustainable innovation concerns changes in the philosophy and values of the organization, as well as its products, processes, or practices, to serve the specific purpose of creating and realizing the social and environmental value and economic development. This paper is prepared as a contribution to the sustainable conceptual development of sustainable innovation and can be a guide in the company's sustainability efforts. In addition, this paper also identifies, analyzes, and synthesizes enterprise-level sustainable innovation practices and processes and provides guidance on sustainable achievement based on the conceptual framework of sustainability values. The sustainable value framework concerns pollution prevention strategies by minimizing waste and emissions from the company's operations and product control strategies through integrating stakeholder views into business processes.

Keywords: sustainable innovation, sustainable value framework, business sustainability

TAX CONSULTANT ROLE AND ATTRIBUTES PHENOMENA ON SUSTAINABLE SOCIAL DEVELOPMENT: TAX AUTHORITY, TAXPAYER, AND TAX ADVISOR POINT OF VIEW.

Otto Budihardjo: Gugus Irianto. Co-Promotor: Ali Djamhuri dan Zaki Baridwan. Doctorate Program Accounting Science Brawijaya University. Tax Consultant Role and Attributes Phenomena on Sustainable Social Development: Tax Authority, Taxpayer, and Tax Advisor Point of View.

ABSTRACT

This study aimed to reveal tax consultant role and attribute as a profession arose by taxpayers demand to comply their taxation duties and rights. It focuses on how tax consultant role and attributes devote to tax compliance as an important dimension on sustainable economic development of society. The research answers question how tax consultants run their roles and pinned the attributes toward a sustainability development.

This research employed a qualitative approach under phenomenology methodology. Study embraced transcendental phenomenology established by Edmund Husserl. Phenomenology commonly focused on experiences of informant subjects as sources to gather meanings and essences as knowledge. Especially, Edmund Husserl's transcendental phenomenology bore its strength on its normative and rigorous method. Furthermore, the study elaborated roles and attributes out from three corners of subjects' experiences, i.e. tax authority, taxpayers, and tax advisors.

The study revealed roles and attributes as follows which are important to support sustainability of economic development: (1) role as consultant and adviser to taxpayers (Advisor/advisory), (2) role as bridge or conduit to tax authorities and taxpayers (Encompass), (3) education role (Educate), (4) integrity (Truthful), (5) objective (Unbiased), (6) Competent, and (7) piousness to God Almighty (Divine). Anagram of every first word picked is: EDUCATE. Tax consultant bears EDUCATE as his/her roles and attributes. The essence of this meaning is education as an eternal process, only death can interrupt, from cradle to grave.

THE DIGITAL TRANSFORMATION OF ACCOUNTING PRINCIPAL SUBJECT

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ABSTRACT

Since the pandemic period, conducting distance learning for higher education has been inevitable. The quality of distance learning among accounting students takes particular attention toward its implementation. This paper aims to discover the digital transformation on accounting principal subject from the student's perspective. The paper will gather the student response to distance learning on accounting principal subject and explore the most effective learning process based on the student's experience on the learning outcomes, learning management, communication process, students' response and learning activity. By implementing qualitative thematic analysis, the study tries to observe among 100 accounting students who tell their learning experience toward 10 open questions through google form. The result finds that learning motivation become the new indicator to measure the effectiveness on distance learning of accounting principal subjects. Moreover, a digital platform that may increase the distance learning quality was also successfully discovered through the mention of podcasts and videocasts from the observed answers.

Keywords: Accounting Distance Learning, Podcast, Learning Motivation

INTRODUCTION

The results of the preliminary *survey* according to student responses regarding indicators of the communication process during online learning for introductory accounting courses are as follows:

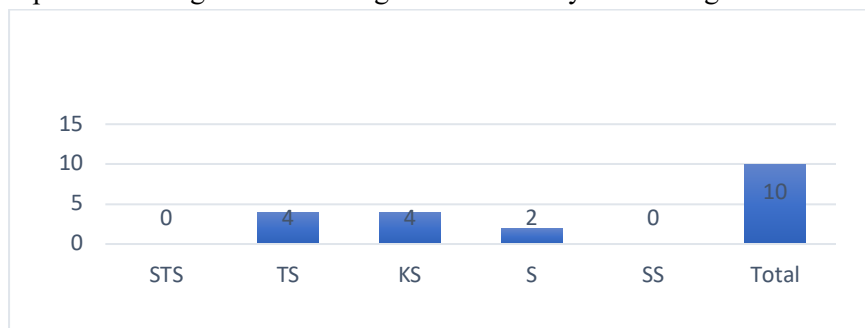


Figure 1. Communication Process

Source: Processed Data, 2022

In Figure 1, criteria can be determined from student responses based on the first item communication process indicator, i.e., "According to Figure 1, learning online is very helpful in replacing learning offline during a COVID-19 pandemic". The result of the survey researcher's introduction results of 10 (10) respondents from the student accountancy Faculty of Economics, University of Juanda Bogor, only 2 (two) people answered agree, and no someone answered very much agree. The majority of students, namely 4, answered that not enough agreed, and four people answered that No agree that online learning can replace offline learning. However, online education and offline learning must be the same.

According to journal research (Dita et al., 2021), The results of his study show that online learning is only a different learning model. However, the learning system remains the same as learning that is done offline / face-to-face. Online learning is essential for studying effectively, as already explained above.

This _ is strengthened by results of research conducted by Ariani (2021) that with learning distance, this remote /online participant educate No stare advance direct so that no _ accept will understanding become very minimal. So that problematic understanding and lack _ of training in a manner direct. More carry-on results research conducted by Yanti (2021) showed that implementation online learning is a must more notice facility implementation learning and evaluation learning in implementation online learning. Results of research conducted by Budianto et al. (2021) showed that system learning in a manner that advances more readily understood from online learning and online learning _ needs the motivation to learn and also has more Lots variation in giving deep agar material implementation more effective online learning.

Earlier object research used _ is School Intermediate Vocational (SMK). In research, the aspect of online planning, implementation, and evaluation learning. However, in research, This is different from the study previously. This study uses five indicators of the effectiveness of online learning and an object study done on Djuanda Bogor University students and focused on the eyes studying accountancy basics. Research This uses *mixed method* According to Sugiyono (2017), the *mixed method* is a method study that combines the two methods study that is qualitative and quantitative in something activity research so that more data is obtained *comprehensive, valid, reliable*, and objective.

According to Poerwandari (2009), thematic analysis is a process of encoding information, which can produce complex lists of themes, theme models, indicators related to these themes, or things in between a combination of those mentioned. The theme can at least describe phenomena and maximally interpret phenomena. Superiority from analysis thematic is flexible method _ Because method This No depending on theory and epistemology. Thus, this method can be used To answer various types of question research. Thus, this research intends to determine how effective digital-based online learning is in introductory accounting courses during the COVID-19 pandemic.

Based on the description above, the researcher is interested in raising the title " Digital-Based Basic Accounting Learning Thematic Analysis. " Because problems that occur during the online learning process of introductory accounting courses are not practical enough.

LITERATURE REVIEW

1. Learning Effectiveness

Yudhira (2021) The Effectiveness of Online Learning During the *Covid-19* Pandemic (Comparative Study of Offline and Online Learning in Introductory Accounting Courses at Tjut Nyak Dhien University). The results of his research show differences between offline learning methods and online learning in the learning outcomes of the Introduction to Accounting course.

Dita et al. (2021), regarding Indicators of Effective Learning in Online Learning (In Networks) During the *COVID-19 pandemic* at SMAN 2, Bondowoso, indicate that online learning is only a

different learning model. However, the learning system remains the same as face-to-face learning.

Budianto et al. (2021) about Analysis Learning Accountancy Online at SMAK "X." result of the study This is students, of course, feel easy to understand the material through the learning system advance, though in more online learning, 30% of students can understand the material with both students _ need motivation student so the teacher might give more material _ Lots variation.

2. Perception of Students and the Success of Digital-Based Basic Accounting Learning

Prasetio et al. (2021), regarding Student Perceptions of Online Learning in Accounting Courses in the *New Normal* Era, show that the average *percentage* of teaching material aspects is in the low category, namely 50.67%. The teaching methodology aspect has an average *percentage* in the low category of 46.75%. Moreover, the average *percentage* of aspects of *soft skills* is in the low category, which is 46.6%. So, face-to-face learning is needed in accounting courses that require direct companions and explanations of course material from lecturers in introductory accounting courses.

Junaidi et al. (2021), concerning the Influence of Interest and Online Learning on Understanding in Introductory Accounting Courses (Studies of Higher Education Students in Malang City), show that interest and online learning have a significant effect on the level of understanding of the Introduction to Accounting courses at the Islamic University of Malang, Muhammadiyah University of Malang, State University of Malang, and State Islamic University of Maulana Malik Ibrahim Malang.

Fatmawati and Istiyana (2020) regarding Acceptance of Study Program Students Accounting Against Online Learning During the Covid-19 Pandemic. The results of his research show that students of the accounting study program accept online learning well. All the hypotheses in this study are accepted. Namely, each arrangement has a positive effect. The Accounting Study Program students sampled in this study were Generation Z, sensitive to technology.

Hidayatullah (2021) regarding the Success Factors of Using Online Applications for the Accounting Learning Process During the Covid-19 Pandemic. This study obtained results using Partial Least Square with the help of WarpPLS. This study obtained the results that the use of technology for learning is influenced by perceived usefulness and perceived ease of use. So, when students think technology is easy to use and improves performance, these students will use it. However, facilitating conditions such as signal or network availability do not affect the use of technology for learning.

METHOD

This research uses a qualitative research approach from Sugiyono (2018). Research methods are used in scientific terms (experiments) where the researcher becomes an instrument, and qualitative data collection and analysis techniques place more emphasis on meaning. The qualitative research methodology aims to analyze and describe the reality or research object through social activities, behavior, and perceptions of people individually and in groups. Images were analyzed using the thematic analysis mechanism. Thematic analysis is the process of identifying patterns or themes in qualitative data. Braun and Clarke (2006) state that thematic analysis is a qualitative research technique that identifies, analyzes data, and reports whether patterns still exist and presents them clearly and thoroughly. The stages of the thematic analysis application based on the data obtained by open-ended questions were analyzed thematically using the support of the NVivo 12 application. The thematic analysis aims to identify themes, i.e., patterns in data that are important or interesting, and use these themes to discuss research or state something about a problem. A generic pitfall is using the primary interview question as the theme.

The participants in this study were Djuanda Bogor University students who took part in online learning in introductory accounting courses. The students involved are in the study programs of Accounting, Management, Islamic Economics, and Agribusiness—classes of 2021, 2020, and 2019. The regular and Employee/Evening classes used an entirely online system during the COVID-19 pandemic, using 100 students. Before the COVID-19 pandemic, learning was carried out face-to-face, that is, learning was

carried out *face-to-face* in class. With the COVID-19 pandemic, learning has been changed to entirely online using an LMS and media vehicles such as *Zoom, Google Meet, and WhatsApp* into virtual classes. Learning is carried out in 14 meetings.

Asynchronous implementation is mainly done using various considerations in a fully online system. The lecturer prepares all learning needs through teaching materials like *the PowerPoints uploaded* to the LMS.

Research data was collected through an online written questionnaire. Before conducting an online questionnaire, the researcher created a grid of online questionnaire instruments according to the conceptual and operational definitions of the topics studied so that they are more effective and synchronous using learning objectives. The questionnaire was validated by two lecturers related to using courses and learning, namely lecturers who teach introductory accounting courses. The questionnaire instrument consists of five parts, adapted using indicators of learning effectiveness, which are related to using the communication process, managing the implementation of learning, student responses, learning activities, and learning outcomes. The form of the instrument is a filled-in question using a total of 15 questions. The instrument was made on *Google Forms* and then given to 100 students online. The duration of data collection was carried out for seven days. Students can answer questions using student perceptions while participating in online learning in introductory accounting courses. Students will send their answers in *the Google Form*, which will be entered as *output data* for the questionnaire for further processing by the researcher. Data collection in this study was carried out using an online written questionnaire. Before conducting the online questionnaire, the researcher created synchronous online questionnaire instrument questions using the conceptual and operational definitions of the topics studied to make them more effective and synchronous using objective study.

The questionnaire instrument consists of five parts taken according to the indicators of the effectiveness of online learning. The effectiveness of learning has five (five) indicators that serve as a reference for effective learning, namely management of learning applications, communication processes, student responses, learning activities, and learning outcomes Yusuf (Dita et al., 2021). The form of the instrument is a filled-in question using a total of 16 questions. The instrument was formed on *a Google form* and then distributed to students at Juanda University in Bogor with criteria influenced by the researcher. Students can answer questions in sync using their heart's content that they experience while carrying out online learning in introductory accounting courses. Students will send their answers in *the Google form* and enter as questionnaire output data for the research process.

Data analysis uses thematic data analysis mechanisms (deductive techniques) by selecting the code, referring to the theory, deriving the code on synchronous themes, matching the code using indicators that have been influenced, evaluating and interpreting the output, and concluding (Boyatzis, 1998). Responses according to each participant in the analysis using the help of NVivo 12. The use of NVivo 12 to facilitate the coding and categorization of participants. All data is included in *Nodes and Cases* to be grouped as data using an exclusive code. Next, the researcher will discuss all codes and categorization and the possibility of integrity between codes, as a result of which the code can be streamlined. Through thematic analysis, using the help of Nvivo 12, researchers found codes that have been adapted to use indicators according to the theory that has been influenced. Of the five (five) indicators that have been found, *the output* of thematic data analysis using NVivo 12 means that the researcher found 1 (one) new indicator so that learning introductory accounting courses can be said to be effective in carrying out learning if the indicators can be implemented when carrying out subject learning—introductory accounting courses. Indicators of the effectiveness of online learning in introductory accounting courses *output* thematic data analysis using NVivo 12 receive output according to the five initial indicators that the researcher has influenced according to Yusuf's journal (in Dita et al., 2021).

The first indicator is the communication process using the opening learning code and learning

direction, learning relationships, attendance, and repeating material. The second indicator is implementing management using coherent learning codes, consistent learning, *storytelling*, and quizzes. The third indicator is the student response. The fourth indicator of learning activities uses the discussion method code and the question and answer method. The fifth indicator is learning outcomes. Using good value codes and material understanding. Coupled with new indicators, namely learning motivation using *intrinsic* and *extrinsic motivation* codes.

RESULTS AND DISCUSSION

Table 1 Respondents' Responses to the Effectiveness of Online Learning in Basic Accounting

Indicator	Statement Items	Frequency					N	Score	Average	Ket.
		STS	TS	KS	S	SS				
		1	2	3	4	5				
Communication Process	X1.1	0	2	53	28	17	100	360	3,6	Good
	X1.2	0	1	76	21	2	100	324	3,24	Enough
	Average								3,42	Good
Management of Learning Implementation	X1.3	0	0	43	46	11	100	368	3.68	Good
	X1.4	0	0	26	59	15	100	389	3.89	Good
	Average								3.78	Good
Student Response	X1.5	0	1	64	34	1	100	335	3.35	Enough
	X1.6	0	1	26	57	16	100	388	3.88	Good
	X1.7	0	1	47	37	15	100	366	3.66	Good
	Average								3.63	Good
Learning Activity	X1.8	0	0	64	36	0	100	336	3,36	Enough
	X1.9	0	0	62	30	8	100	345	3.45	Good
	Average								3,40	Enough
Learning outcomes	X1.10	0	0	58	41	1	100	343	3,43	Good
	Overall Average								3.55	Good

Source: Processed Data, 2022

Based on Table 1, of the 100 respondents studied, in general, the respondents' responses to the statement *items* on the variable effectiveness of online learning were at an average of 3.55. The average respondent responds well to the statement items of the variable effectiveness of online learning. In the variable effectiveness of online learning, it can be seen that the highest index value is 3.89, which is found in the fourth question *item*, namely that lecturers in introductory accounting courses always accept and explain the questions that submitted by students when studying online online, and the lowest index value of 3.24 is found in the second statement item, namely, the online learning method makes it very easy to understand primary accounting material.

The effectiveness of online learning for digital-based introductory accounting courses during the Covid-19 pandemic can be measured using indicators of learning effectiveness from Dita et al. (2021) indicators that serve as a reference for effective learning, namely the management of learning implementation, communication processes, student responses, learning activities, and learning outcomes. The findings in this study illustrate that there is still 1 (one) new indicator obtained in the

research that the researchers conducted using NVivo 12-assisted thematic analysis.

1. Communication Process

The results of thematic data analysis using NVivo 12 out of 100 student respondents obtained the result that the communication process when carrying out online learning in introductory accounting courses obtained codes for communication process indicators as follows :

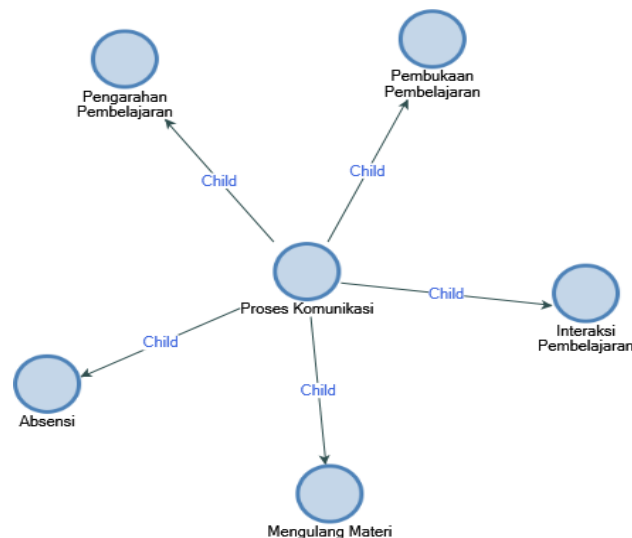


Figure 2. Code of Communication Process

Source: Data Processing *Output* with NVivo 12, 2022

1) Opening of Learning

"Pray so that the learning process will run smoothly, Read bismillah, Greetings and Greetings, Opening material, explain lesson plan, recite bismillah, reciting prayers, Greetings and self-introduction, Praying that lectures run smoothly, Pray together, Conveying related verses of the Holy Quran.

2) Learning Briefing

"Give learning directions what will be conveyed.

" Giving information that material can be obtained at LMS, and a meet will be held at the appointed hour."

Provide information that will be explained."

3) absence

"Absence, Checking the number of students, Checking attendance and questioning the reason if someone is not present."

4) Learning Interaction

"The interaction process is quite good, and the primary accounting course lecturer is also very understanding towards students and vice versa.

The interaction process is very smooth, where when there is material that is not understood during learning, we can immediately ask questions.

2. Management _ Implementation of Learning

The results of thematic data analysis using NVivo 12 from 100 student respondents obtained the result that the management of learning implementation when carrying out online learning for introductory accounting courses obtained codes for indicators of management of learning implementation as follows :

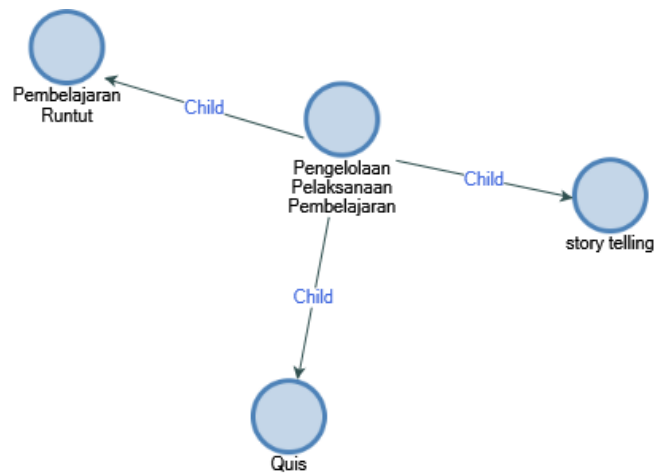


Figure 3. Code of Learning Management

Source: Data Processing *Output* with NVivo 12, 2022

1) Steady Learning

"Yes, in sequence, It has been in sequence, It has been running, Yes, It has been in sequence, It has been in sequence, It has been in, Yes, yes, it is in sequence."

"It has been perfect, and the sequence from opening to closing is correct."

2) Storytelling

" Telling stories, stories about anything else, telling stories, melting the atmosphere, fairy tales, venting, story telling, confiding, venting, telling stories, interspersed with telling stories, but still in accordance with the material being explained."

3) Quiz

"tasks and examples of assignments, lots of practice, students are active in working on the questions, Lecturers for introductory accounting courses always come in, explain the material, and train by giving assignments, practice questions, and answering questions that lecturers have given for introductory accounting courses before so they know and understand everything. Do not give them assignments or practice questions."

3. Student Response

Results of thematic data analysis using NVivo 12 out of 100 student respondents obtained the result that student responses when carrying out online learning in introductory accounting courses to get codes for student response indicators are as follows.

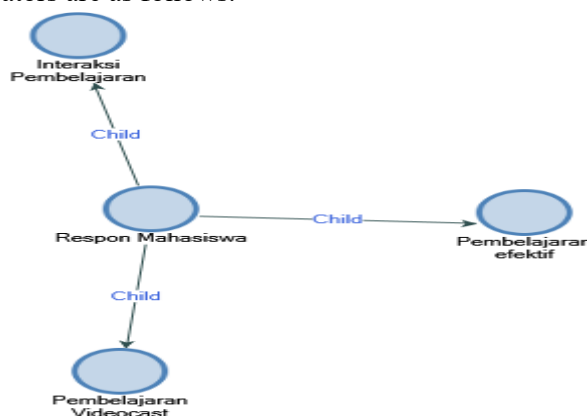


Figure 1. Code of Student Response

Source: Data Processing *Output* with NVivo 12, 2022

1) Learning Interaction

"When students need help understanding the introductory accounting course, the lecturer can help provide answers and reasons so that students can understand the intent of the question when the introductory accounting course lecturer gives reasons. Suggestion because material and practice tend

to understand more practice, so we know in analyzing it that when a lecturer in introductory accounting courses explains too much material, students get bored.

"I am not even tired yet."

"The effective method is that there must be interaction between the lecturers of basic accounting courses and students so that students can understand the material well "

2) Effective Learning

"Good, the lecturer for the introductory accounting course has explained very clearly and very well, quite understandable, already good, quite good, practical, satisfying, beneficial, beneficial, rather than not learning at all but understanding less when using online, the material can be well received regarding theory and calculations.

3) Learning Videocasts

An effective way to learn this subject is through lecturers in introductory accounting courses conducting live tutorials to explain material quantitatively or in calculations. By using a video or something."

4. Learning Activity

Results of thematic data analysis using NVivo 12 out of 100 student respondents obtained the result that learning activities when carrying out online learning in introductory accounting courses get codes for indicators of learning activities as follows.

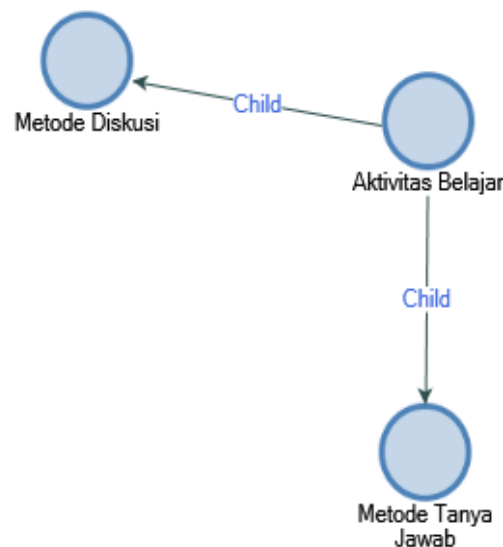


Figure 5. Code of Learning Activity

Source: Data Processing Output with NVivo 12, 2022

1) Discussion Method

"Opening discussions, providing opportunities for discussion, yes giving us opinions and discussing, yes, it really provides opportunities to discuss using zoom meetings or using via wa group."

2) Question and answer method

" Yes, do a question and answer session, give a question and answer session if you feel you don't understand or answer the questions being discussed, yes, provide question and answer interactions, yes, yes, do a question and answer."

5. Results Study

The results of the thematic data analysis using NVivo 12 from 100 student respondents obtained the result that the indicators of learning outcomes when carrying out online learning in introductory accounting courses got the code as follows:

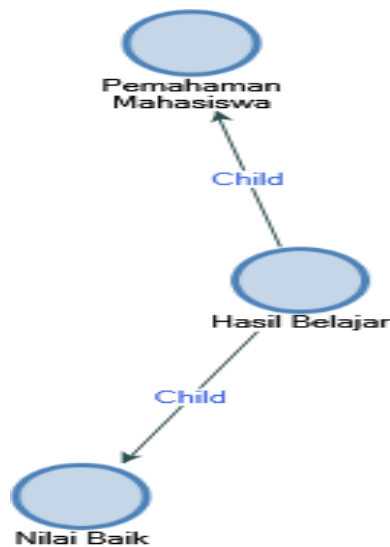


Figure 6. Code of Learning Outcomes

Source: Data Processing *Output* with NVivo 12, 2022

1) Student Understanding

"AKD 1 learning whether offline or online still provides understanding to students."

"50% because there is a bit of a shadow about act 1."

"Yes, because after all in basic accounting online learning we can still ask the lecturers for basic accounting courses even though they are not optimal."

2) Good point

"A, 90%, and the level of understanding is 95%, satisfactory, 80/70, Good, 80%

Need for more understanding of basic accounting, Satisfactory, High "

6. Motivation to learn

The results of the thematic data analysis using NVivo 12 learning motivation get the code as follows :

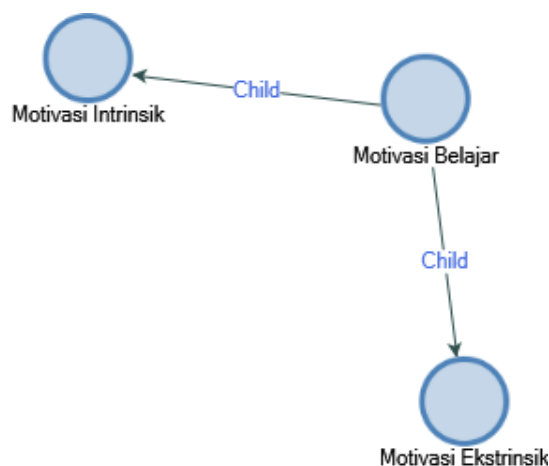


Figure 7. Code of Learning Motivation

Source: Data Processing *Output* with NVivo 12, 202 2

1) intrinsic motivation

"On the positive side, students don't have to pay for transportation when they go to campus and can be more efficient."

"Online learning really helps the learning process during a pandemic like this."

"yes do with enthusiasm."

2) extrinsic motivation

"Yes, lecturers in introductory accounting courses always motivate and encourage their students. Motivate so that we are excited about learning even though learning is online. Provide motivational videos and words of encouragement."

Digital-Based Basic Accounting Learning Thematic Analysis can be measured using learning effectiveness indicators from Yusuf (in Dita et al., 2021) indicators, which serve as a reference for effective learning, namely the management of learning implementation, communication processes, student responses, learning activities, and learning outcomes. The findings in this study illustrate that there is still 1 (one) new indicator obtained in the research that the researchers conducted using NVivo 12-assisted thematic analysis.

Use effectiveness analysis indicators and codes learning digital-based introductory accounting courses. The results of thematic data analysis assisted by NVivo 12 are as follows :

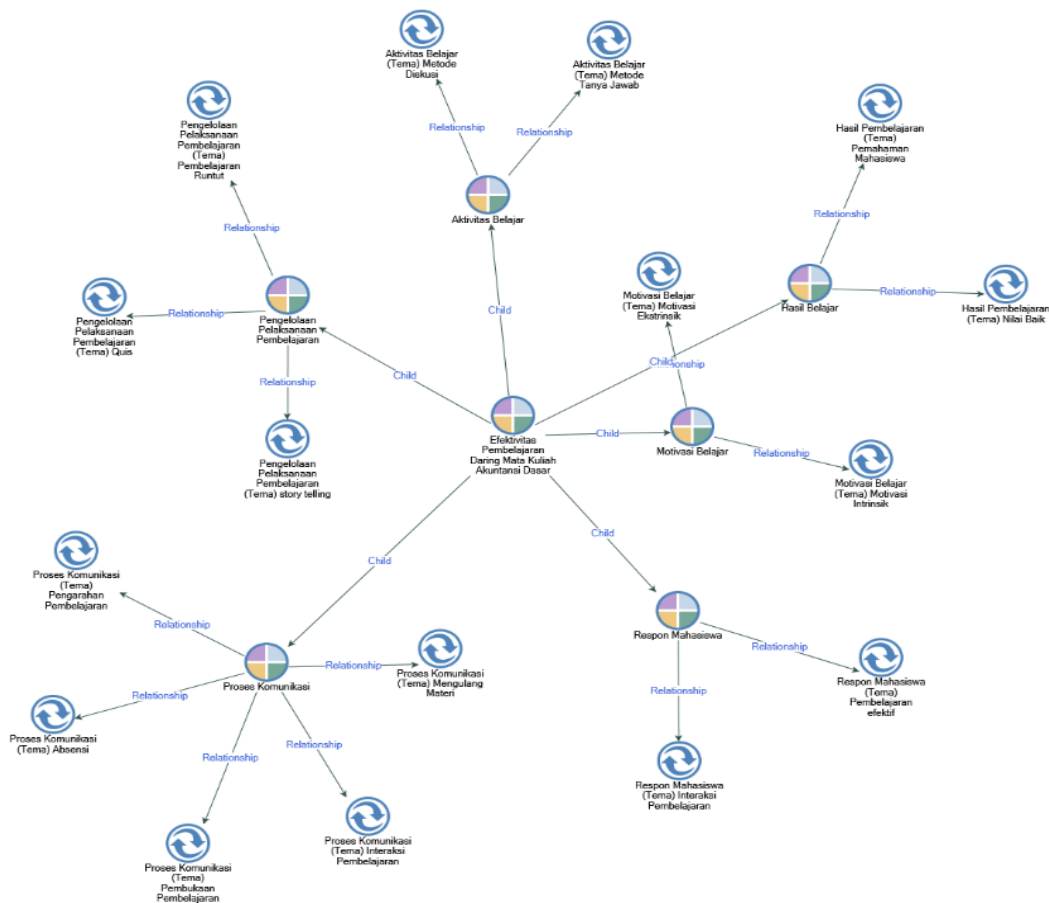


Figure 8. Thematic Analysis Output Using NVivo 12

Source: Data Processing *Output* with NVivo 12, 202 2

CONCLUSION

Conclusion

Based on the research output and discussion on the effectiveness of online digital-based introductory accounting courses during the co-19 pandemic at Djuanda Bogor University, it can be concluded that the effectiveness of online learning for digital-based introductory accounting courses during the co-19 pandemic at Djuanda Bogor University includes indicators, namely, Communication Process, Management of Learning Applications, Student Responses, Learning Activities, Learning Outcomes, and Learning Motivation. In the research, researchers also found a new indicator: learning motivation.

Suggestion

After researching the effectiveness of online learning for introductory accounting courses at Djuanda Bogor University, there are suggestions put forward by the researcher,

1. In carrying out online learning for introductory accounting courses, the authors hope that lecturers will be able to consistently carry out online learning by always paying attention to indicators of the effectiveness of online learning.
2. It would be nice for students when carrying out online learning in introductory accounting courses to be more active when carrying out learning so that learning activities run effectively.
3. It would be nice for the researchers to hope to receive more effective online learning in introductory accounting courses when lecturers discuss the theory of calculations assisted by lecturers creating or posting learning videos so that students can understand calculation material better and can carry out independent learning while watching learning videos.
4. Further research, to conduct quantitative research, is assisted by using the existing codes in this study to retest the effectiveness of online learning in introductory accounting courses.

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The Effect of CSR Activities during the COVID-19 Pandemic on Value Relevance

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Abstract

The impact of the coronavirus pandemic has caused significant changes in the capital market industry, especially the equity market value of financial industry companies. Good financial governance is an effective way to help companies survive a pandemic. Corporate Social Responsibility (CSR) as a corporate responsibility that affects the market value of the company's equity, in general, is still limited, especially to financial assets' fair value during the pandemic. This research uses the case study method and panel data analysis. The results of the study state that the value relevance of financial assets' fair values is not all associated with the firm's CSR activities during the pandemic. CSR activities can improve the relationship between the hierarchy of fair value financial assets level 1 and level 2, earnings per share, and book value of equity to the company's stock price. These results also show that financial companies in Indonesia seeking to increase the market value of equity during the pandemic can still take advantage of CSR activities to encourage investors to invest.

Keywords: Corporate Social Responsibility, Value Relevance

1. Introduction

This paper investigates the effect of corporate social responsibility activities on the value relevance of financial asset fair values in Indonesia during the pandemic 19. Value relevance is the most fundamental information for giving feedback and predicting value for the investor. Although the value relevance of earning has decreased over time, the presence of other information accounting in the form of free cash flow agency problem (Maksy, 2016), earnings management (Mostafa, 2017; Rahman, 2011), book value (Narullia et al., 2019; Pathirawasam, 2013), the fair value could give meaning information for the investor (Siekkinen, 2017c)

The implementation of PSAK 68 in Indonesia which was adopted from IFRS 13 has also given importance to the market value of the company's equity. Its application instead of the value bases histories has brought changes in the quality of information that is more transparent for investors. It can provide quality financial statement information (Khurana & Kim, 2003). However, their implementation requires deep understanding from users of financial statements (Laux & Leuz, 2009). The use of a fair value hierarchy affects reducing information asymmetry related to reasonable value estimates. Xiaoqing et al. (2012) argue that fair value has increased relevance. Paoloni et al. (2017) found the high quality of aggregate earnings from financial instruments' fair value. Several previous studies revealed that increasing fair value is affected by corporate governance mechanisms (Song et al., 2010), board characteristics (Siekkinen, 2017b), institutional environment (Fiechter & Novotny-Farkas, 2017), audit quality (Siekkinen, 2017a), corporate governance and legal systems (Mechelli & Cimini, 2019). Nevertheless, fair value has longer financial reporting accuracy (Lin et al., 2017) Business practices that lead to CSR activities can also be beneficial and profitable for companies (Mishra & Suar, 2010). Although CSR information does not provide value relevance to company value (Narullia & Subroto, 2018). On the other hand, the relatively unstable condition of the country due to the Covid-19 pandemic tends to trigger changes in value relevance. Examining the value relevance of fair values in the Indonesia pandemic situation may offer insights into how CSR activities affect the relevance of fair value disclosures.

Using a sample of 96 firm-year observations from 48 financing firms, the purpose of this study is to analyze CSR activity's effect on the value relevance of financial assets' fair values varies. by analyzing the pooled sample of 48 companies, this study found that CSR activities affect are not all value relevant for investors. Second, by CSR activities as moderating variables on the value relevance of financial assets fair value estimates, the results indicate that the CSR activities are not all positively associated with the value relevance of the financial assets fair value hierarchy. CSR activities strengthen the value relevance of level 1 and 2 financial assets' fair value. Investors are willing to pay higher for level 1 and 2 financial assets when the company has CSR activities compared to level 3. Investors seem to have complete confidence in the measurement estimation process used by the market price.

We organized the paper as follows: the following section reviews the literature on value relevance studies and CSR activities, mainly focusing on value relevance studies of the fair value hierarchy and the factors that influence it. The third section presents data and methodology, descriptive statistics, four sections 4 presents the results and discussion, and the final section concludes the study.

2. Literature Review and Hypotheses Development

Accounting literature has extensively examined the value relevance to distinguish how investors evaluate accounting information of fair value by using various aspects. Based on the accounting standard (PSAK 68) used in Indonesia, the fair value is arranged as follows: Level 1 (quoted prices in active markets), level 2 (inputs other than quoted prices that are observable either directly or indirectly, or quoted market prices for similar assets or liabilities), and level 3 (unobservable inputs generated by entities) (Ikatan Akuntan Indonesia, 2014). Several previous researchers tested the value relevance of fair value by relating it to investor protection, board characteristics, audit quality (Siekkinen, 2016, 2017a, 2017c), corporate governance and legal system, and institutional environment. The results of the study indicate that there are differences in the value relevance of the estimated fair value hierarchy. Siekkinen (2016) found the difference in value relevance between the hierarchy of fair value either market prices (level 1), inputs other than market price (level 2), or fair value estimates generated entities (level 3). Value relevance of fair value decreases with the quality of investor protection. The information on fair value estimates also depends on the quality of the legal system in their firms. This statement was confirmed by Mechelli & Cimini (2019) that the legal system positively affects the value relevance of fair value estimates. Investors gain confidence that each of

the three levels helps reduce uncertainty toward the more opaque fair value estimates (Chung et al., 2017). They have been associated with higher market pricing and lower information risk for level 3 estimates. Fair value measurements levels 1 and 2 have higher analytical prediction accuracy than level 3 (Ayres et al., 2017). Large fair value reporting in financial statements has higher quality persistence, predictability, variability, and income smoothing (Paoloni et al., 2017)

The use of a fair value hierarchy has succeeded in reducing information asymmetry related to reasonable value estimates. Fair value accounting at levels 1 and 2 has a higher analytical prediction accuracy than level 3 measurements (Ayres et al., 2017). Nevertheless, a measurement level of 3 reduces uncertainty in the analyst's information environment (Barron et al., 2016). Valuation of value relevance is also the difference in corporate social responsibility activities. Narullia & Subroto (2018) stated that CSR information is not relevant to firm value. On the other hand, Qiu et al. (2021) confirm that firms' CSR activities can increase the movement of stock returns during the pandemic. Communities involved in CSR activities have more impact than employees or customers during a pandemic. Pandemic conditions provide great business opportunities to maximize CSR activities and contribute to overcoming social and environmental challenges (He & Harris, 2020). García-Sánchez & García-Sánchez (2020) found the company's efforts to protect the interests of shareholders and investors' CSR activities. The Pandemic also affects the financial effect of small-scale companies (Bartik et al., 2020). The welfare of the employees during the Covid-19 pandemic and government policies have a significant positive impact on retailer performance, while customer and brand protection, technology use, and supply chain have a significant positive impact on retailer performance (Khaled et al., 2020).

2.1 Value relevance of financial assets level 1, level 2, and level 3

The value relevance of the hierarchy of the fair value of financial assets based on IFRS 13 has not been studied extensively in Indonesia. It implemented a fair value hierarchy through PSAK 68 in 2015. Fair value relevance research generally used samples in America (Goh et al., 2015; Song et al., 2010) and Eropa (Siekkinen, 2016, 2017b, 2017a). Song et al. (2010) found that all fair values in the fair value hierarchy are relevant values for investors. Investors place higher valuations on level 1 and level 2 fair value assets than on level 3. Goh et al. (2015) extend the research of Song et al. (2010) using a more extended period and confirmed that all fair value levels are also relevant. Level 1 and 2 fair value assets are more value-relevant than level 3 fair value assets. Lu & Mandé (2014) documented a similar result that fair value relevance decreased by fair value hierarchy. This stated also explained by Siekkinen (2016) that the fair value hierarchy has value relevance and decreases to hierarchy.

All studies examining the relevance of fair value by hierarchy found relevant information and diminish by hierarchy. However, several previous studies analyzed the relevance of fair value in US and European standards. The results have not been valid for the Southeast Asia sample, especially Indonesia. Based on the findings of Song et al. (2010), Lu & Mandé (2014), Goh et al. (2015), and Siekkinen (2016, 2017a, 2017c) The research hypotheses are as follows:

H1. The fair value of financial assets is relevant and decreases according to hierarchy.

2.2 CSR activities and Relevance of the value of the fair value of financial assets level 1, level 2, and level 3

CSR activities use the size of the company's costs and the actual expenses of the company's activities as a proxy for measurement (Ramzan et al., 2021). Investors predict the future income earned from their investments using all relevant information (Scott, 2015, p. 154). Disclosure of social responsibility will be beneficial for the company in terms of assets, profits, and equity presented in the financial statements as well as an increase in stock prices (Lako, 2011, p. 149). CSR activities are business practices considered profitable and beneficial for companies (Mishra & Suar, 2010) The higher the market value of the company, the greater the CSR activities available from the firm owned. Companies with a high commitment to CSR activities will affect financial performance (Bag & Omrane, 2022). Firms with continuous CSR activities will have a relatively greater capacity to develop, maintain, and replace assets. Thus, the relevance of the financial statements presented will be more relevant. CSR activities also have a significant impact on financial performance and provide a broad view for managers to integrate CSR activities into business objectives (Maqbool & Zamir, 2021). Companies with CSR activities are considered capable of affecting the value relevance of financial statements. It makes Investors tend to place their funds fairly in companies' CSR activities consistency will provide confidence for investors to own company assets and encourage high share

price offerings. Based on previous research, CSR activities will tend to affect the value relevance of the financial assets hierarchy. The second hypothesis is as follows:

H2. CSR activities increase the value relevance of the financial assets hierarchy

3. Data and Methodology

The aim is to analyze the value relevance of the fair value of financial assets and the impact of activity CSR variables using annual panel data over the period 2020 - 2021, which covers 48 firms in the Indonesia Stock Exchange. Thus, the number of observations is 96 company-year. One of the advantages of a panel data structure is that this study has more observations, and degrees of freedom and offers a parsimonious panel data approach from a dynamic and broader structural model. The fair value of financial assets per level in the fair value hierarchy, earnings per share, the book value of equity each share, and shares outstanding are hand-collected from firms' annual reports. Stock price data used sources were from the official site (yahoo.com), and CSR activities data were used in the sustainability report. Table 1. presents descriptive statistics of each variable.

Table 1
Descriptive statistics

Panel A: Test variable (per share)				
Variable	Mean	Maximum	Minimum	Std. Dev
Price	2195.65	27.475	50	3951.19
VFA1	1173.90	32.765	0	2912.54
VFA2	3619.36	129.717	0	10613.95
VFA3	2144.21	114.422	0	8689.55
EPS	178.95	2108,00	31.35	114.03
NBS	1721.32	17491,37	32.13	1355.59
CSR	24.67	29.91	14.50	2.69
Panel B: Relative size of variables				
Variable	Mean (%)	Maximum (%)	Minimum (%)	Std. dev (%)
VFA/ Total assets	57.28	99.07	0	32.04
VFA1/ Total assets	12.86	61.41	0	11.96
VFA2/ Total assets	24.88	99.07	0	28.81
VFA3/ Total assets	19.53	98.72	0.19	31.50

Table 1 presents descriptive statistics of the test variable. The number of observations is 96—the average price of stock prices three days before and before the announcement of the financial statements. VFA is all fair value financial assets combined into one variable. VFA1, VFA2, and VFA3 are fair values of financial assets per share for every fair value hierarchy level. EPS is the earnings per share, NBS is the book value of equity per share, and CSR is CSR activities.

The mean share price is 2195,65 rupiahs, and the mean of levels 1, 2, and 3 fair value of financial assets per share are 1173.90, 3619.36, and 2144.21 rupiahs, respectively. Finally, the mean earnings per share (EPS) and the book value of equity per share (NBS) are 178.95 and 1721.32. All variables are presented as per-share values.

The relative amount of fair value financial assets to total assets is 57.28 percent, meaning that the value of 57.28 percent of the total assets is measured at fair value in the 2020 – 2021 financial assets. On average, 19.53 percent of total assets are classified as level 3 fair value of financial assets. Hence, 19.53 percent of the total assets of the 96 observations are merely estimates made by the firms themselves. Thereby, on average, a financial firm measures the value of 19.53 percent of its total assets without any observable market price.

Method

Estimating the value relevance of accounting numbers used model prior value relevance studies the fundamental Ohlson (1995) model or a modified Ohlson (1995). A modified (Ohlson, 1995) model is applied to the accounting numbers of 2020 – 2021 financial statements to test the value relevance of the fair values in the fair value hierarchy. Following the model used by Goh et al. (2015) and Siekkinen (2016). This model research is divided into independent variables (VFA1, VFA2, VFA3), control variables (EPS, NBS), and moderating variables (CSR activities). All independent variables have been share-scaled to reduce scale effects, as proposed by Barth & Clinch (2009). The modified Ohlson (1995) model used to test Hypothesis 1 is as follows:

$$\text{Price}_{it} = \beta_0 + \beta_1 \text{VFA1}_{it} + \beta_2 \text{VFA2}_{it} + \beta_3 \text{VFA3}_{it} + \beta_4 \text{EPS}_{it} + \beta_5 \text{NBS}_{it} + \varepsilon_{it} \quad (1)$$

Price is the price of a stock of firm *i* seven days around the publication of financial statement (-3 days, 1 day, +3 days), VFA1_{it}, VFA2_{it}, VFA3_{it} is the fair value of financial assets per share of firm *i* related to the fair value hierarchy at the end of the fiscal year *t*. The fair values hierarchy of financial assets is collected from annual reports and divided by outstanding shares. EPS is the earnings per share excluding extraordinary items of firm *i* at the end of the fiscal year *t*. NBS is the book value of equity per share of firm *i* at the end of the fiscal year *t*

The pool of the observations from 2020 to 2021 for testing Hypothesis 1 used a sample consisting of 96 firm-year observations. The levels of fair-value financial assets are value-relevant if their coefficients are positive and significantly different from the value of zero (Barth & Clinch, 2009; Siekkinen, 2016). The effect of CSR activities on the relevance value of the fair value of financial assets for testing hypothesis 2. The CSR activities variable interacts with each fair value level, earning per share, and book value equity. The equation model for testing hypothesis 2 is as follows:

$$\text{Price}_{it} = \alpha_0 + \alpha_1 \text{VFA1}_{it} + \alpha_2 \text{VFA2}_{it} + \alpha_3 \text{VFA3}_{it} + \alpha_4 \text{EPS}_{it} + \alpha_5 \text{NBS}_{it} + \alpha_6 \text{CSR}_{it} + \alpha_7 \text{VFA1}_{it} * \text{CSR}_{it} + \alpha_8 \text{VFA2}_{it} * \text{CSR}_{it} + \alpha_9 \text{VFA3}_{it} * \text{CSR}_{it} + \alpha_{10} \text{EPS}_{it} * \text{CSR}_{it} + \alpha_{11} \text{NBS}_{it} * \text{CSR}_{it} + \varepsilon_{it} \quad (2)$$

Equation (2) examines potential changes in the coefficients for every independent and control variable. The coefficients interaction variables how much the coefficients have changed before and after the interaction. If e.g., $\alpha_7, \alpha_8, \alpha_9$ is more than $\alpha_1, \alpha_2, \alpha_3$ and significant, it means that CSR strengthens the association between the market price of equity and fair value of level 1, level, level 3.

4. Result and Discussion

4.1. Value relevance of the fair value of financial assets

The research results using test the pooled sample (48 firms). The test value relevance of fair values in the fair value hierarchy uses the modified Ohlson (1995) as suggested by Goh et al. (2015), and Siekkinen (2016) The regression is estimated with a sample of financial industry firms to obtain comprehensive results on fair value relevance. The regression analysis presented in Table 2 shows that not all fair values in the fair value of financial assets hierarchy according are relevant.

Table 2
Value relevance of the fair value of financial assets

Variable	Coefficient	t-stat	p-value
Intercept	1074.80	8.107	0.000***
VFA1	0.443	3.497	0.000***
VFA2	0.181	3.413	0.000***
VFA3	0.156	3.256	0.000***
EPS	4.110	7.531	0.000***
NBS	0.232	3.923	0.000***
n	96		
Adj. R-squared	0.946		

Table 2 presents the results of the regression analysis. The dependent variable is PRICE. VFA1, VFA2, and VFA3 are fair values of financial assets per share for every single level of the fair value hierarchy. EPS is the earnings per share excluding extraordinary items. NBS is book value equity per share. the regression use Firms and year-fixed effects

* Indicates statistical significance at 0.10 levels.

** Indicates statistical significance at 0.05 levels.

*** Indicates statistical significance at 0.01 levels

The adjusted R-squared is 0.946 and substantially higher than 0.837, as reported by Siekkinen (2016) and 0.74 by Goh et al. (2015) The coefficients for financial assets' fair value in level 1 (0.443) and level 2 (0.181) are significantly higher than the coefficient for level 3 (0.156) financial assets (Table 2). Investors seem to stay willing to pay a higher price for levels 1 and 2 than for level 3 financial assets. Earning per share (EPS) coefficient of 4.110 is higher than the book value equity per share coefficient (0.232), indicating that the market value of equity is more extensively driven by earnings than the book value of equity.

The coefficients in the regression results are relatively low compared to the coefficients reported by Goh et al. (2015) and Siekkinen (2016). The level 2 financial assets coefficient is 0.181

compared to 0.216, as written by Siekkinen (2016), and (0.96), as documented by Goh et al. (2015). There are multiple explanations for the differences in coefficients. First, the economic condition heterogeneity across firms in the sample may drive the results in the regression analysis. Second, financial assets are more value-relevant in firms with high assets due to the heterogeneity across firms in Indonesia and the other potential explanations. However, the value relevance of fair values is monotonically decreasing when descending in the fair value hierarchy from level 1 to level 3. Thus, hypothesis 1 is accepted.

4.2. CSR Activities and value relevance of fair values

The impact of CSR Activities on the fair value relevance of financial assets using moderating each fair value level. Table 3 presents the regression results.

Table 3
Impact CSR activities on the value relevance of financial assets fair values

Independent Variables	Coeff.	t-stat	p-value
Intercept	1225.132	7.977	0.000
VFA1	0.307	3.101	0.001
VFA2	0.059	2.341	0.013
VFA3	0.027	2.288	0.043
EPS	3.970	6.344	0.000
NBS	0.249	4.722	0.000
CSR	20.811	3.024	0.004
VCSR1 (VFA1*CSR)	10.462	3.560	0.002***
VCSR2 (VFA2*CSR)	5.980	3.267	0.005***
VCSR3 (VFA3*CSR)	4.399	1.497	0.116***
ECSR (EPS*CSR)	66.597	2.797	0.015***
NCSR (NBS*CSR)	11.692	2.754	0.024***
Adj. R-squared	0.919		
N	96		

Table 3 present the result of the regression analysis. The dependent variable is price. VFA1, VFA2, VFA3: fair value of financial assets level 1, level 2, level 3 per share; EPS: earnings per share; NBS: book value per share; CSR: corporate social responsibility activities; VCSR1, VCSR2, VCSR3: Interaction of fair value financial assets level 1, level 2, level 3 per share with corporate social responsibility; ECSR: Interaction of earnings per share with corporate social responsibility; NCSR: Interaction of the book value of equity per share with corporate social responsibility

* indicates statistical significance at 0.10 levels

** indicates statistical significance at 0.05 levels

*** indicates statistical significance at 0.01 levels

The Investigating value relevance of financial assets' fair values CSR activities using a whole sample without different companies. CSR activities rates in the Indonesian financial industry. It is observable that the vast majority of financial asset fair values are value-relevant when the company has CSR activities. Regarding CSR activities, level 1 and level 2 fair value assets are increasingly relevant for investors, while level 3 has no effect. The correlation coefficients of CSR1 (VFA1*CSR) and CSR2 (VFA2*CSR) are 10,462, 5,980 respectively. CSR activities strengthen the fair value of financial assets relevance levels 1 and 2 with a significance level of 1%. Level 3 financial assets are not more value-relevant in the availability company the company's CSR activities. Investors are willing to pay relative equally for level 1 assets and level 2 assets in CSR activities. The explanation for the findings may be that investors believe that firms in CSR activities produce` relevance for fair value level 1 and level 2. Finally, the results indicate that CSR activities are more dominant than book value in increasing the company's equity value. Thus, the value relevance of financial assets' fair values is positively not all associated with the firm's CSR activities. Therefore, The results rejected hypothesis 2.

5. Conclusion

This paper investigates whether the fair value has still a value relevance in the pandemic and how CSR activities during the pandemic 19 affect the value relevance of financial assets' fair values varies. The research used a modified Ohlson (1995) valuation model on the sample financial companies from 48 in Indonesia). The results show that all fair values of financial assets in the fair value hierarchy are relevant for investors. Level 1 fair value of financial assets is more relevant than level 2 and level 3. Investors are willing to pay more for level 1 and level 2 fair value financial assets

than for level 3 fair value. Investors assume managers are not more credible in conveying fair value information that is not available in an active market when estimating fair value. Thus, investors are reasonably confident and willing to pay a higher price for the fair value of financial assets level 1 and level 2 financial assets.

Second, CSR activities increase the fair value relevance of financial assets as measured using levels 1 and level 2. However, the fair value relevance of level 3 financial assets has no effect. Investors find level 1 (quoted prices in active markets) and level 2 (inputs other than quoted prices that are observable directly or indirectly) more relevant to determining the market value of equity. For fair value assets level 3, where management ultimately discretion plays a role, investors do not have sufficient confidence in the fair value estimates made by the company. In addition, investors are skeptical of fair value estimates. Therefore, investors seem to focus on fair value assets levels 1 and 2 when analyzing a company's financials with CSR activities. Therefore, fair value requirements may differ with different levels of CSR activities.

This study contributes to value relevance as well as CSR literature. Information on earnings, equity book value, and financial asset fair value can reflect the market value of equity. CSR is a moderating variable that affects the value relevance and financial asset fair values 1 and 2. This study develops the literature by presenting global evidence of the value relevance of fair values under IFRS 13 that are associated with firm CSR activities. This paper is not without limitations. First, the sample consists of only limited social activities, thus allowing for differences in results with economics and environmental aspect. Second, the research design is only specific to financing companies to be different in other sectors. Future research can use GRI (Global Reporting Initiative) Guidelines index measurements to obtain comparable results with the issue of fair value relevance of financial assets of companies.

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THE EFFECT OF SIZE, PROFITABILITY AND LEVERAGE ON DISCLOSURE OF SUSTAINABILITY REPORTING THROUGH THE INTERNET ON REGISTERED MINING SUB SECTOR COMPANIES ON THE INDONESIA STOCK EXCHANGE

Butet Wulan Trifina

ABSTRACT

Developments in the field of information technology affect companies in running their business, a paradigm shift in recent years requires companies to also disclose non-financial information. Utilization of internet technology creates a new way for companies to facilitate communication with investors. The use of the internet as a medium for disclosing information will make it easier for investors to obtain company information. Investors can obtain the required information by viewing the information presented on the company's website page.

This study aims to determine and analyze the effect of company size, profitability and leverage on the disclosure of sustainability reporting via the internet in companies listed on the Indonesia Stock Exchange (IDX). The population in this study is a mining company listed on the Indonesia Stock Exchange in 2020. The data analysis technique is carried out using the classical assumption test, hypothesis testing using multiple linear regression analysis with the help of SPSS 25.0 for windows.

Determination of the number of samples using the proportional stratified random sampling method, then grouped according to the type of industry. This study uses secondary data in the form of annual reports of companies listed on the Indonesia Stock Exchange in 2020 and observations on company websites. The data analysis method used multiple linear regression.

Keywords: Sustainability Reporting, Internet, website, Company Size, Profitability, Leverage

THE HOLISTIC HAPPINESS THEORY: ESTABLISHING A NEW THEORY FOR *TRI HITA KARANA* BASED-SUSTAINABLE FINANCE

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ABSTRACT

Purpose– This study aims to initiate a new theory that is considered to be able to accommodate various stakeholder interests and is more suitable for analyzing concepts of Sustainable Finance (SF) as an effort to realize shared happiness and prosperity.

Design/Methodology/Approach– This study is a literature review conducted to criticize stakeholder theory, which is deemed inappropriate to be used in analyzing the implementation of the SF concept of economic, social, and governance (ESG), especially in the context of the financial sector in Bali. This study seeks to initiate a new theory to be able to analyze the concept of SF in the context of the financial sector in Bali, which is considered more appropriate when referring to the *Tri Hita Karana* (THK) philosophy and the theory of the happiness paradox of capitalism proposed Aydin (2012).

Findings– This study found a formulation of a new theory referred to as the "holistic happiness theory," which is seen as more holistic in analyzing the SF concept.

Practical implications– The implication of this study is that the holistic happiness theory can become a new theory that is more holistic so that it can be used to analyze the SF concept that is more in line with the situation, conditions, and characteristics of the spiritualist Balinese community.

Originality/ Value – This study uses THK philosophy and theory to analyze the happiness paradox of capitalism, which was initiated by Aydin (2012) to formulate the holistic happiness theory as a new theory in analyzing SF.

Keywords— The Holistic Happiness Theory, Sustainable Finance, *Tri Hita Karana*.

Paper type— Conceptual paper

INTRODUCTION

The world is currently experiencing a multidimensional global crisis. Corporations are seen as the parties most responsible for the crisis's occurrence because their activities are identical to those of exploiting nature for profit. The problem of multidimensional crises becomes even more complex when COVID-19 hits. The COVID-19 has succeeded in crippling the world economy and human life in various sectors. Humans are required to be able to survive and bounce back from the conditions of a multidimensional crisis and the attack of COVID-19. One of the programs deemed relevant to overcome problems related to the multidimensional crisis and the economic downturn caused by COVID-19 is sustainable development, which is described through Sustainable Development Goals (SDGs). The financial services industry, namely the banking sector, is seen as playing an important role in implementing the SDGs agenda through the concept of sustainable finance (SF) as initiated by the Financial Services Authority (OJK) and World Wildlife Fund (WWF).

Previous studies on SF in relation to sustainability have been carried out by several researchers in a global context as well as in Indonesia. Studies in a global context, among others, conducted by: Dorry and Schulz (2018) found that SF in Luxembourg has an important role in encouraging the public and private sectors to become more sustainable; Kemfert and Schmalz (2019) found that the policy framework developed in Europe contributed to the development of SF; Ferri and Acosta (2019) found that an ethically oriented and sustainable SF is the key to achieving the SDGs; Sepetis (2020) found that SF can actually affect the sustainable healthcare system; Schumacher et.al. (2020) found that policies and regulations play a role in improving SF implementation and encouraging low-carbon investment; and Straub (2021) found that SF is globally used to promote new, more profitable financial activities

Studies related to SF and sustainability have also been carried out by several researchers in Indonesia, including Halimatussadiyah, et.al. It was found that there were differences in bankers' perceptions of SF between local and foreign banks in Indonesia. Setyowati (2020) found that financial institutions tend to have a high level of compliance in the implementation of SF, which is carried out through the delivery of sustainability reports annually to financial regulators; Tafsir (2021) finds that SF has a positive impact on the implementation of good corporate governance (GCG) and environmental protection policies.

Based on previous studies, it can be seen that the reference used to implement SF mostly refers to the ESG concept, and the theory used to study the SF concept often refers to stakeholder theory. In contrast to previous studies, this study has novelty, namely trying to criticize the ESG-based SF concept that was studied using stakeholder theory, considering that ESG as a reference for sustainability performance is still not completely holistic because of the absence of a spiritual dimension, and stakeholder theory is seen as not fully in accordance with the characteristics of the financial sector in Bali, which is identical to the nuances of spirituality.

SF in the context of the financial sector in Bali is considered more appropriate if it refers to the philosophy of Tri Hita Karana (THK) as a philosophy of life for Balinese people that has been passed down from generation to generation. Stakeholders theory, which is used to analyze SF and which still emphasizes the existence of contractual relationships, often uses accounting as a means to increase profitability, stability, and growth so that companies can again be trapped in the labyrinth of capitalism and neoliberalism. This study seeks to undermine the domination of capitalism and neoliberalism for further initiation of a new theory based on the THK philosophy and theory. The Happiness Paradox of Capitalism was initiated by Aydin (2012) so as to produce a theoretical formulation that is more holistic and more in line with the context of the Balinese financial sector.

METHOD

This study is a literature review that seeks to criticize stakeholder theory. Stakeholder theory is considered inappropriate to be used in analyzing the implementation of the ESG-based SF concept, especially in the context of the financial sector in Bali, because it still contains value capitalism and neoliberalism.

This study seeks to propose a new theory to be able to analyze the implementation of the SF concept in the context of the financial sector in Bali, which is considered more appropriate if it refers to THK's philosophy and the happiness paradox of capitalism theory as proposed by Aydin (2012). The new theoretical idea in the context of this study is expected to be an appropriate reference for the implementation of the SF concept that is more holistic and more in line with the situation, conditions, and characteristics of the financial sector in Bali.

FINDINGS AND DISCUSSION

Stakeholder theory states that corporate responsibility must be directed to accommodate the different interests of stakeholders (Chan et al., 2014; Freedman and Jaggi, 2010). Stakeholder theory explains the direction of the company's responsibility to be able to handle stakeholder demands as an effort to maintain good relations with stakeholders. A company is said to have referred to the concept of sustainability if it has tried to accommodate the interests of stakeholders, especially those who determine the availability of resources for the implementation of the company's operational activities.

It is frequently found that there is a condition that the company's understanding of sustainability through managing stakeholder interests leads to increased profitability, stability, and growth (Damak Ayadi and Pesqueux, 2005). The implementation of the SF concept, which was originally a form of the financial sector's responsibility towards social and environmental conditions, ultimately leads to financial interests. This is because every company is surrounded by a network of expectations derived from contractual relationships with the government, suppliers, employees, customers, and the community. The existence of stakeholder theory is deemed no longer appropriate if it is used to analyze the concepts and practices of SF, especially in the context of the Balinese financial sector, which is identical with the nuances of spirituality.

The purpose of the formulation of a new, more holistic theory as a basis for analyzing the implementation of the SF concept in the context of the Balinese financial sector is to realize shared happiness and prosperity. Perhaps many researchers argue that the theory of happiness is the most appropriate theory to apply to the implementation of the SF concept. There are several theories of happiness which are widely known, including Set-Point Theory, Comparison Theory, and Effect Theory (Veenhoven, 2006). Set-Point Theory views that happiness is a stable human attitude that is largely determined by the biological conditions of each person, and only a small part is determined by the state of the surrounding environment. Comparison Theory reveals that happiness is a continuous appraisal process that involves comparisons of the perceived ideal life. Meanwhile, Effect Theory defines happiness as an assessment of the accumulation of all the pleasures and sufferings experienced.

Veenhoven (2006) then tries to combine the three theories of happiness by defining overall happiness as the level of hedonic influence that determines the balance between pleasant and unpleasant experiences. The combination of all three theories of happiness, hereinafter referred to as theory of happiness capitalists, in Aydin's view (2012), has indeed succeeded in capturing some parts of the reality of happiness, but the integration of the three is seen as not being able to tell the complete story, because there are some important aspects of happiness that are left behind. Aydin (2012) argues that the theory of happiness described by Veenhoven (2006) mostly refers to value capitalism, which stresses more on the ego or the sense of being self-centered. Happiness based on value capitalism cannot last long because it only puts forward the material aspect as a partial understanding of human nature, which is selfish and tends to ignore other elements of human nature.

Aydin (2012) then criticizes the capitalist theory of happiness and proposes a new theory called the happiness paradox of capitalism. This new theory outlines the key elements of human nature, suggesting that authentic, pure, and lasting happiness is only possible if each individual can recognize and respond to their needs and wants in a balanced way. The happiness paradox of capitalism is believed to be an approach that can listen to and balance the various elements of the voice of human nature that exist in the human heart or conscience. When the various elements of human nature are balanced, happiness and well-being can be realized.

The happiness paradox of capitalism, as initiated by Aydin (2012), is seen as a more appropriate theory if it is used to analyze the implementation of the SF concept compared to the theory of happiness capitalists presented by Veenhoven (2006). However, Aydin's (2012) research is a type of conceptual research that was initiated in the context of Saudi Arabia, which, of course, has different characteristics and cultures from the context of this research conducted in Indonesia, especially in the context of the financial sector in Bali. If further investigation is carried out, it can be seen that there are similarities in the phenomena and concepts of thought between this study and the study conducted by Aydin (2012) in framing research problems. The problems that arise are seen as a result of the dominance of human selfishness, which tends to override other basic traits. Selfish nature that is oriented to value capitalism and neoliberalism is suspected to be the cause of injustice in fulfilling the different interests of stakeholders.

The existence of injustice in the fulfillment of stakeholder interests can, if allowed to continue, of course, result in SF's goals not being realized. Therefore, it is necessary to take rescue action through the formulation of a new theory that can balance the various elements that can ensure the realization of SF's goals. The happiness paradox of capitalism theory, if it is applied to analyze the implementation of the SF concept, can indeed be said to be similar. However, adaptation needs to be made considering that the context of this research is the Balinese financial sector, therefore it is necessary to have a philosophical foundation that has been believed and inherited from generation to generation by the Balinese people, namely the THK philosophy.

The THK philosophy essentially teaches a balanced attitude to life between piety to God, protecting fellow humans and maintaining and preserving the natural environment (Wiana, 2007). THK, which has been widely known as a legacy of life philosophy from generation to generation, is seen as a guide for humans, especially the Balinese people, in maintaining and fostering a harmonious relationship between humans and God (Parahyangan), between human beings (Pawongan), and humans with the natural environment (Palemahan), in order to realize happiness and prosperity together. In this study, THK, which means three ways or roads to happiness, can be formulated into a theory, which in this study is called the THK-based Theory of Happiness.

The THK-based Theory of Happiness views that the global ESG-based SF concept requires universality and excludes locality, so the ESG-based SF concept cannot necessarily be applied in the context of Bali tourism. Why is that? Because the ESG-based SF concept tends to negate the divine element (spiritual dimension). The absence of a spiritual dimension in the ESG-based SF concept, which is actually the "soul" of the financial sector in Bali, will further weaken the original character of the Balinese people. The THK-based Theory of Happiness further argues that the absence of a spiritual dimension in the ESG-based SF concept tends to strengthen the dominance of capitalism and neoliberalism, which can further lead to injustice.

If a trace back is done, it can be seen that there are similarities in essence between the theories of happiness of Aydin (2012) and the THK-based theory of happiness in analyzing and interpreting happiness. It is said that because Aydin (2012) views that authentic, pure, and eternal happiness cannot be achieved by only prioritizing material aspects, which are reflected in the nature of human egoism and tend to ignore other basic human traits such as altruism, the THK-based theory of happiness also views that happiness and shared prosperity cannot be achieved if humans tend to ignore one of the dimensions of THK, which can make these two theories entangled in the tangled threads of capitalism.

Essentially, the two theories of happiness (this is both the one initiated by Aydin (2012) and the THK-based theory of happiness) agree that happiness cannot be achieved if there is still the dominance of capitalism and neoliberalism, which prioritize material aspects. It is undeniable that humans are often tempted to prioritize material (physical) aspects over psychological (mental) aspects and spiritual aspects, which, of course, are dominated by selfishness. When viewed in the context of Bali tourism, the THK-based theory of happiness seems to be a more appropriate theory to use to analyze the implementation of SF because it offers a spiritual dimension to happiness. However, in the context of this research, a theoretical formulation is needed to analyze the SF concept as an effort to achieve justice for all stakeholders.

As for the happiness theory, what is meant is the result of the harmonization of the 2 dimensions of the theory of happiness, namely: the happiness paradox of capitalism and the THK-based theory of happiness, which in the context of this research is referred to as the theory of holistic happiness. Through the theory of holistic happiness, it is hoped that the analysis of the SF implementation can be carried out in a more holistic manner and can create justice for all stakeholders in order to realize shared happiness and prosperity.

CONCLUSION

The implementation of the global ESG-based SF concept according to stakeholder theory is considered to have been able to achieve justice for all stakeholders in the financial services industry. However, the ESG-based SF, which was analyzed using stakeholder theory in the context of the financial sector in Bali, was deemed to be incompatible with the characteristics of Balinese society, which are identical to the nuances of spirituality. This study seeks to criticize the implementation of the ESG-based SF concept, which is analyzed using stakeholder theory, considering that stakeholder theory is seen as not being able to achieve justice for all stakeholders.

This study succeeded in formulating a new theory, which is known as the Theory of Holistic Happiness, which is considered more in line with the characteristics and context of the financial sector in Bali. This study can provide implications, among others: (1) theoretically for the development of accounting and finance, especially related to SF; (2) practically for the financial services industry in Bali in implementing the SF concept; and (3) policy recommendations for the government regarding the implementation of appropriate regulations so that the SF concept can be analyzed using the theory of holistic happiness as an effort to realize happiness and prosperity together.

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The LQ Analysis and Attractive-Competitiveness Analysis in the Priority Determination of Featured Horticultural Commodities to Drive the Sustainability of Food Security

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This research aims to determine and to identify the superior commodities of horticulture and seasonal fruits, especially in vegetables and fruits. The research used the survey method. Primary data were collected through in-depth interviews and questionnaires. Samples were determined purposively, by involving apparatus from the Department of Food Crops, Horticulture, and Plantation of Jember Regency, academicians, and businessman in the horticulture and seasonal fruits field. This research used the analysis of Location Quotient (LQ) and Attractiveness-Competitiveness Analysis. The results declared some findings, consist of: (1) The major commodities of horticulture and seasonal fruits were large chilies, small chilies, watermelon, and long beans. (2) The top priority groups in which they had the competitiveness and attractiveness of agribusiness and had the value above the average were big chilies, small chilies, watermelons and long beans. (3) The areas in which development of chili commodities were significant widespread in 12 (twelve) sub-districts, small chili commodities were in 15 (fifteen) districts, watermelon commodities were only in 3 (three) districts, and long beans were in 15 (fifteen) districts in Jember Regency.

Keyword: Priority, Horticulture Center, Attractiveness-Competitiveness Analysis

THE ROLE OF CIVIC SOCIETY ON E-GOVERNANCE ADOPTION: CASE STUDY OF VILLAGE-OWNED ENTERPRISE (BUM DESA) PANGKAH WETAN DISTRICT

DIDIED POERNAWAN AFFANDY

ABSTRACT

In a regime faithful to neo-liberal dogma, governance must be carried out within the constraints of the doctrines of limited government and self-regulating markets. This village-owned enterprise concept has shifted the locus of power away from citizens and their representatives toward those with capital. Hence, participatory governance is a new paradigm in society to push the enterprise to be more open, transparent, and accountable. The purpose of this study is to examine inclusive governance in the political or bureaucratic structures. Unavoidably, the new normal has a significant role in bureaucracy transformation and as output is e-governance. Therefore, e-governance is heart and essential to maintaining the association between civic society and village owned enterprise. Moreover, to reach this aim, society participation is demanded to keep the bottom-up governance and solve the exact problems. Hence, this study aims to examine the role of civic society's influence on the governance performance of village-owned enterprise as an actor among many in public policy using e-governance principles as proxies. Political inclusion as moderating variable in the association between civic society and governance performance is also tested. Moreover, BUMDesa in Gresik Regency is a unit analysis of this study. Hence, the study expected to find that civic society's role via BUMDesa significantly has a positive relationship to governance performance based on governance principles..

THE ROLE OF DIGITAL BANKING FOR SUSTAINABILITY BUSINESS OF ISLAMIC RURAL BANKS IN INDONESIA

INDRA SISWANTI

ABSTRACT

The purpose of this study is to present a green business model for Islamic rural banks in Indonesia through the role of digital banking in moderating the influence of corporate governance on the sustainable business of Islamic rural banks in Indonesia. The total population in this study was 164 (one hundred and sixty four) Islamic rural banks spread across Indonesia, while the sample used in this study was 30 (thirty) Islamic rural banks located in the areas of Jakarta, Tangerang, Depok, Bekasi and Bandung. The data used is secondary data taken from financial reports and annual reports for the 2016-2021 period. Furthermore, the data is processed using smart PLS. The results of the study state that corporate governance has a significant positive effect on the sustainable business of Islamic rural banks in Indonesia. Digitas banking moderates the influence of corporate governance on the sustainable business of Islamic rural banks in Indonesia.

The role of taxpayers' income and knowledge of taxpayers on the improvement of tax compliance

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ABSTRACT

This study aims to analyze the effect of taxpayer knowledge on tax compliance in Jakarta and West Java. This type of research is quantitative. The method used in this study is primary data with non-probability sampling, namely purposive sampling to taxpayers who have reported the 2021 annual tax return as many as 229 respondents. Data analysis used the Lisrel 8.80 program with Maximum Likelihood Estimation which was used as a basis for testing and discussing hypotheses. In confirming and completing information about things that were not asked in the questionnaire, a debt interview was conducted. The results showed that there was a significant positive effect between taxpayer income and taxpayer knowledge on tax compliance. So it is recommended that the government in this case the Directorate General of Taxes is always active in providing socialization to the public about taxpayer knowledge and the importance of understanding the role of taxes in a state so that tax compliance will increase.

Keywords: taxpayer income, taxpayer knowledge and tax compliance

Peran penghasilan wajib pajak dan pengetahuan wajib pajak terhadap Peningkatan Kepatuhan Pajak

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ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh pengetahuan wajib pajak terhadap kepatuhan pajak di Jakarta dan Jawa Barat. Jenis penelitian adalah kuantitatif. Metode yang digunakan dalam penelitian ini adalah data primer dengan pengambilan sampel adalah *non probability* yakni *purposive sampling* kepada wajib pajak yang telah melaporkan Surat Pemberitahuan Tahunan tahun pajak 2021 sebanyak 229 responden. Analisis data menggunakan program Lisrel 8.80 dengan *Maximum Likelihood Estimation* yang digunakan sebagai dasar untuk melakukan pengujian dan pembahasan hipotesis. Dalam mengkonfirmasi dan melengkapi informasi tentang hal-hal yang tidak ditanyakan dalam kuesioner, dilakukan *debt interview*. Hasil penelitian menunjukkan bahwa terdapat pengaruh positif signifikan antara penghasilan wajib pajak dan pengetahuan wajib pajak terhadap kepatuhan pajak. Sehingga disarankan pemerintah dalam hal ini Direktorat Jenderal Pajak selalu aktif dalam memberikan sosialisasi kepada masyarakat tentang pengetahuan wajib pajak dan pentingnya memahami peran pajak dalam sebuah kenegaraan agar kepatuhan pajak semakin meningkat.

Kata Kunci: penghasilan wajib pajak, pengetahuan wajib pajak dan kepatuhan pajak

THE USE OF PERFORMANCE MEASUREMENT SYSTEMS AND HOSPITAL WASTE MANAGEMENT EFFECTIVENESS: THE PERSPECTIVE OF A TOP MANAGEMENT TEAM MEMBER

Made Aristia Prayudi

ABSTRACT

This paper aims to explore how hospital top management team (TMT) members use performance measurement systems (PMS) to achieve effective hospital waste management. This is a qualitative study based on upper echelon theory and Simon's Levers of Control Framework. Data was gathered through a semi-structured interview with eight TMT members from three public hospitals in Bali and East Java, Indonesia. This study reveals that for hospital waste management activities, PMS is used both diagnostically and interactively. It is also found that the emphasis on how TMT members use PMS (diagnostic, interactive, or both) is related to their professional or administrative orientation. These findings have practical implications in which hospital PMS should be designed by considering TMT members' orientation in order to make hospital waste management more effective.

TRACKING THE CORPORATE SOCIAL RESPONSIBILITY PRACTICES (A Case Study in PT. PG Gorontalo)

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Abstract : This study aims to uncover and explore the forms of social and environmental responsibility of Gorontalo Sugar Company. To achieve the objectives of the study, the researcher use a qualitative method with case study approach. The results of this study indicate that PT. PG Gorontalo actually has a worldview that do CSR programs for their encouragement and recognition that business activities are not just economic activity hunter advantage in the continuity of the business, but also should contribute positively to the environment and to participate actively in maintaining environmental sustainability. But the reality is that the concept of CSR has always been ridden by the corporate interest itself. This is an evidence in the CSR programs is concern to the interests of the company itself.

Keywords: The company, CSR, Social and Environmental Performance

UNDERSTANDING AND AWARENESS OF GREEN ACCOUNTING APPLICATION FOR MSMEs (STUDY ON TOFU INDUSTRIAL ESTATE, TROPODO VILLAGE, INDONESIA)

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Abstract

This study aims to describe the level of concern and understanding of the application of green accounting by MSME actors. The research was conducted at the Tofu Industry SMEs in Tropodo Village, Sidoarjo Regency, Indonesia. Data collection techniques using interviews. Data analysis in this study used the stages of reduction and elimination, reduction of transcendental phenomenology, variation of experience and knowledge, and focus group discussion. The results of this study indicate that there are several MSME business actors who have a good understanding and concern in protecting the environment as a form of implementing green accounting. However, they have not understood the details of business expenses and environmental costs in a structured and detailed manner, but they have realized that environmental costs are the responsibility imposed on their business financial statements. In addition, this research is also expected to provide advice for consideration to MSME actors in the application of green accounting in a structured and systematic way, so that in the process of implementing and disclosing green accounting can provide benefits to the surrounding community.

Key Words: MSMEs, Green Accounting, Social Responsibility, Environmental Costs

Validate Field Survey Data through Mobile Application (Case Study in Ministry Social Integrated Welfare Data)

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Abstract— The objective of the study is to construct an application model of overcoming Indonesia's Government problems in validating data resulted from field data survey in the case of social welfare data of the Ministry of Social Affairs. Since decades, there have been issues on the big gap data of invalid citizen number of eligible fund transfers from the government. The main problem is a lack of application codifying the citizen data. The research method of the study is using extreme programming software engineering methodology to build mobile application by using its features and also connected to cloud computing systems to process and calculate the data. The finding of the study construct an application of mobile model that can validate field data survey of Ministry's Integrated Social Welfare Data continuously and timely.

Keywords— mobile apps, data validation, Social Integrated Welfare Data

1 Introduction

Rapid information and technology development provide governments with a wide opportunity to access, manage, and utilize information in a timely and accurate manner according to their development priority. Technology development is helpful to attain efficient and effective government administration, in addition to giving value-added to the governments in interacting with various stakeholders. This condition seems to transform the paradigm of regional government administration in many levels of decision-making [1], [2].

As a result of the technology development, the government begins to put its efforts to implement technology to change the service pattern and minimize the risk and costs [3]. These efforts can be seen from the birth of e-government to improve its service quality, effectiveness, and efficiency [2], [4], [5]. E-government is seen as an opportunity by majorities of countries around the world, especially the developing countries, to solve socioeconomic [6] and public service issues [7]. A study of e-government in Afghanistan proves that it plays a role in solving IT and social issues [8]. In Zimbabwe, the previous study [9] identifies the factors affecting gaps in e-government service. Another study reports the socio-technical effect on the e-government service improvement in Rwanda. Meanwhile, based on the study in South Africa, it is asserted that a proper framework should be prioritized before implementing e-government. It is also asserted that, based on the implementation of e-government in the financial sector in Ghana, the system implementation requires legal and public sector support.

In Indonesians context, the government uses e-government based on Law no. 25 of 2004, Law no 17 of 2007, Law no. 23 of 2014, and Law no. 14 of 2018, on development plan to make the development system accountable. The implementation of these policies face hindrances, including poverty alleviation, one of the goals UNDP has set through the SDGs, has become one of the main programs of the Indonesian government. Indonesia as a developing country still has many problems related to poverty. Based on data from the Central Statistics Agency (BPS) the number of poor people in Indonesia in the beginning of 2020 reached 26.42 million people or around 9.78% of the total population [10]. To reduce poverty, the Government of the Republic of Indonesia has been and is working towards the Acceleration of Poverty Reduction through various programs carried out by the relevant Ministries and Institutions.

The government has a variety of integrated poverty reduction programs ranging from poverty reduction programs based on social assistance, poverty reduction programs based on community empowerment and poverty reduction programs based on small businesses empowerment, which are run by various Government elements both in central and regional level. To run these programs, the government needs a database that stores data of the poor citizen in Indonesia. Therefore, the Government of Indonesia created a centralized data collection database for social assistance programs containing socio-economic and demographic information from around 40% of the population in Indonesia with the lowest welfare status. These 40% populations of the lowest socio-economic

Validate Field Survey Data through Mobile Application

conditions represent around 24 million households, or around 96 million individuals [10]. The government has set 14 criterias so that a person is categorized as poor, including the physical condition of the house they live in. One of the main challenges in building centralized data collection for social assistance programs is to identify precisely the target group that will receive the benefits of the program based on the criteria for participation and program objectives. This means that the accuracy of sorting out groups of people who are entitled or not entitled to be program participants becomes very important [11]. Existing literature showed that the centralized data collection in several areas is not well targeted [12], [13], while program attempts to alleviate poverty by giving aid to around 26.42 million households (9.78% of the total population),

Data and information are among the important aspects for evaluating the regional development plan. They are used as the foundation to formulate the development policy and plans. Since the current development data are considered inadequate, efforts are made to update the data gradually and by shifting from manual to electronic mechanisms. Along with the technology and communication advancement, smartphone becomes almost every individual's primary needs due to its ease-of-use and benefits. The community's increased smartphone usage should be viewed as an opportunity to solve the problems currently faced by the government [14].

Several studies have solved issues in government programs to improve its accuracy using smartphone technology [15]–[17]. One of the studies implements mobile government in Malaysia, offering governmental service in any sector to improve user satisfaction [18]. Another study also reports the benefits of implementing mobile government, particularly related to the social promotion in municipal level [19]. Studies have also identified the factors and frameworks of mobile government implementation to figure out factors leading to easier and more comfortable access [20], [21]. In developing a robust mobile government program, four important factors should be taken into consideration, including trust, awareness, perceived response time, and perceived compatibility. These four factors can improve the mobile government application acceptability among the public [18], [22], [23]. The present study contributes to the poverty issues in Indonesia by developing a mobile e-government application.

This study is organized into several sections. Section 2 describes research methodology. The next section (Section 3) discusses the results of the study. In the last section, the conclusion of the study is drawn.

2 Research Methodology

The objective of the study is to construct an application model of overcoming Indonesia's Government problems in validating data resulted from field data survey in the case of social welfare data of the Ministry of Social Affairs. In developing the model application, the development process should be selected properly as the process may significantly affect the duration and the cost. Among various methods to manage the application development is extreme programming agile method, which is commonly used for its gradual and iterative process, thus it is considered suitable for developing the mobile application that help government to address poverty issues in Indonesia [24], [25].

As a recent development technology of mobile smartphone [15], by utilizing the features contained in the device, it can be used to validate data of citizen that recorded in the centralized database, to identify people that is indeed worthy of getting assistance in poverty alleviation programs or not. The focus of the research is to develop application to validate data of Unified Database for Social Protection Programs conduct by Indonesia's government. The methodology used in this research is shown in Figure 1.

The initial stage was collecting secondary data, i.e., centralized database for Social Protection Programs (BDT), followed by developing the mobile application using extreme programming agile method. The initial process of mobile application development was system requirement analysis, comprising of user requirement and system

Validate Field Survey Data through Mobile Application

process analysis. Once the analysis is done, the next step was the interface design development and source code development. The final stage was testing and evaluating application before deploying application for real use.

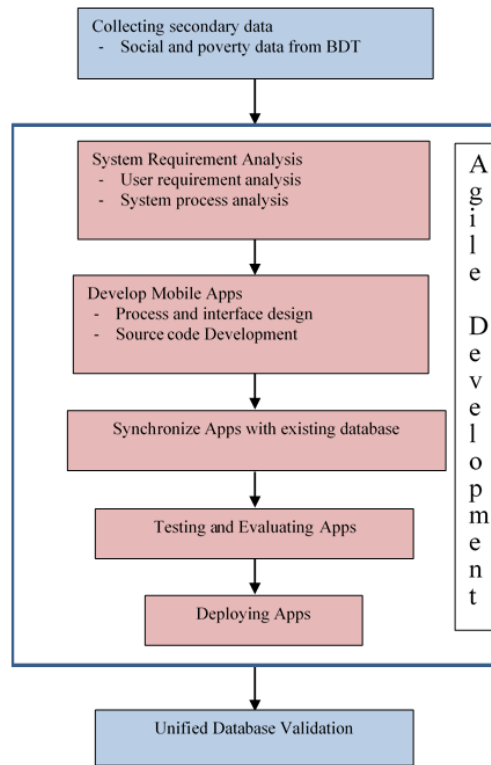


Figure 1. The Research Methodology

2.1 System Requirement Analysis

System requirement analysis is the process of studying various problems that are planned to solve through information systems. This stage determines the problem, identifies the various causes, specifies the solution and identifies the information needs that must be met by the solution. The application was developed to resolve data validation problem of social unified database collected by government. From the system process analysis, that there was an existing system that deployed a database that integrated with the social sector database by adding some information to identify poverty data. The problem of social data collected by government is to identify precisely the target group that will receive the benefits from the government’s programs. The design system model of the developed application is shown in Figure 2.

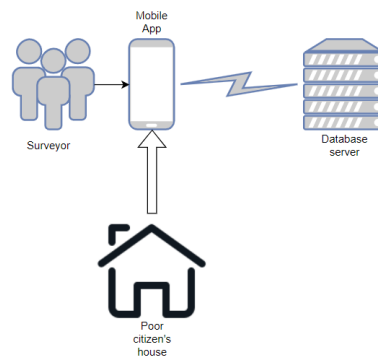


Figure 2. Design system model of developed application

2.2 Development of mobile application

Process and interface design are mainly to facilitate the need for validation process of poverty data by field officers (surveyor). The process allows field officers to record data and send data directly using Mobile Apps to the server. However, if there is no active internet connection, temporary data will be stored in the mobile phone memory and data can be sent to the server at any time if the internet connection is available.

The data that needs to be added during field validation process is photo captured by mobile camera which record the condition of the poor citizen's house and also the coordinates of data being surveyed.

2.3 Testing and evaluating application

Testing and evaluating application conducted through functional testing that verifies all functional process could be run. After running the application, application's initial menu page appear, where the user is asked to perform a login or authentication process before validating, or checking data and entering the system. After successfully login the application, the surveyor was asked to enter the ID DBT data to be validated. When the data has been inputted and the search button is pressed, the data will be sent to the application server for verification, whether the data is recorded in the database. If the data is found, it will be sent from the server to the application so that the data and information in the application will appear in accordance with the IDBDT. Then the surveyor is asked to select the update menu, to update the data, in the form of the location or coordinates of the participant's residence and a photo of the participant's residence. The process of updating this data must be carried out in the field, at the participant's place of residence, because the process of updating the location of the coordinates and photos of the place of residence will be carried out online and in real time. After pressing the update button, the application will go to the next page, namely the data update page.

On this page, surveyors are asked to update the location data for the coordinates of their residence, and also to document photos of the participant's residence. Photos that are recorded and stored can be several photos at once. If the data is verified then the updated data summary will appear on the Uploaded Data List.

3 Result and Discussion

The developed mobile application was created to validate data and at the same time take photos of the physical condition of the poor citizen's house recorded in the Unified Database (BDT), along with the location or coordinates of the residence. This application was developed using Android Studio and was named "Sutasoma" which stands for "Social Data Application for the Community", which is an application used to validate data for the social benefit of the community. This application is about 7 MB in size. The minimum requirement to install this application is a Smartphone device with the Android 4.4 (Kitkat) operating system.

The application was usefully developed and used for data validation by Kediri Regency Government, East Java, Indonesia. Verification has been carried out on 4100 data contained in the database by 30 surveyors. The

Validate Field Survey Data through Mobile Application

results of the validation process are sent to the database server and displayed via a web application containing detailed data of poverty on Social Unified Database (BDT).

From the website, we can verify data by comparing photos sent by mobile application and data from Social Unified Database. We can also verify the location of the citizens and his house by clicking pin map of citizen's address, based on intensive observation and analysis, by comparing the data sent by the mobile application and the data contained in the Social Unified Database.

4 Conclusion

The purpose of this research is to develop a mobile application to validate a unified database for Social Protective Program collected by government. This application was developed using Android Studio and was named "Sutasoma" which stands for "Social Data Application for the Community", which is an application used to verify data for the social benefit of the community. The application was usefully developed and used for data validation on 4100 data of Social Unified Database of Kediri Regency by 30 surveyors.

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VILLAGE FINANCIAL MANAGEMENT: AN OVERVIEW OF HABERMAS CRITICAL THEORY

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ABSTRACT

This article examines the importance of the village financial management process using the Habermas Communicative Action Theory method. The focus of the research is to criticize where there are still village financial management processes that are still not transparent. This study uses a critical approach method. Data was collected through field observations and in-depth interviews with informants in Air Putih Village, Central Bengkulu. The results of the discussion stated that communication actions, in this case, have been carried out in every stage of the village financial management process between residents and the village government, but the communicative form that occurs is still in the form of instrumental rationalization in which the public space which should place the community on an equal footing in obtaining their needs, will but it doesn't seem to be working properly. Therefore, a communicative ratio action must be taken to change it. The right communicative action is very important for the creation of transparent finances. This is something that is important for the creation of inclusiveness and sustainable development in the village.

Keywords: village financial management, Habermas Communicative Action Theory, Transparent and communicative finance.

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