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SROI Analysis of Social Responsibility Programs in Pagar Dewa Village

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ABSTRACT

This study aimed to analyze the impact of PT Perusahaan Gas Negara Tbk's social responsibility (CSR) program which takes place in 2019 - 2021, using the Social Return on Investment (SROI) tool. It was conducted in the company's operational area, which is located in Pagar Dewa Village, Lubai Ulu Sub District, Muara Enim District, South Sumatra Province. The research design used a mixed method, and primary data was collected through interviews with 74 relevant stakeholders from beneficiaries, government, communities, and the company. Meanwhile, the process of searching for secondary data is carried out through a literature review of digital media, books, and journals to enrich the identifying process, as well as conduct impact monetization. Particularly for impact analysis, the researcher used Sustainability Compass which initiated by Herman Daly, and further developed by Alan Atkisson. The results revealed that SROI ratio in 2019 was 1: 3.79, then increasing to 1: 6.34 in 2020 and 1: 6.35 in 2021. These points revealed that the social investment made by the company is effective and has a positive impact on society. SROI is effective for measuring social investments' impact made by companies and helping them to carry out monitoring, improvement, and development, related to program implementation. Likewise, to be by the agenda of Sustainable Development Goals (SDGs) no. 1; without poverty, no. 3; healthy and prosperous life, no. 5; gender equality, no. 6; clean water and proper sanitation, no. 17; partnerships to achieve goals.

Keywords: CSR, SDGs, SROI

Introduction

Evaluation has become a trend that continues to be explored, to answer concerns regarding the impact of program implementation (Flockhart, 2005; Wilson & Bull, 2013). The evaluation refers to a broad meaning, which includes financial and non-financial analysis. In the traditional framework, the evaluation of a program emphasizes the output, without considering changes in results or impacts. The emphasis is completing the program on time, and at the right cost and specifications. It's done without considering the influence of the affected parties (Toor & Ogunlana, 2010).

In the latest approach, the appraisal process is no longer limited to finance. Emphasis on non-financial aspects that underline the presence of physical impact in seeing change, is a must (Barman, 2007; Moore, 2013). This occurs as an implication of increasing attention to the mix of economic, social, and environmental impacts in the operational processes of an organization (Kent & Dacin, 2013). Specifically, the Interorganizational Committee on Principles and Guidelines for Social Impact Assessment (2003) describes social impact as the impact on the physical and emotional experiences of individuals, groups, and communities that have consequences for programs, projects, or activities that change the way they live, work and relate to one another, with others. Furthermore, Social Impact Assessment (SIA) is the process of identifying and

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assessing the effects of an intervention, which results are changes in assets, rights and social systems, including quality of life, culture, health, social interactions and income from livelihoods.

According to Vanclay et al. (2015) describe SIA as a process that involves predicting, analyzing, monitoring, and managing desired and unintended consequences. Similar Aledo-Tur and Gomez (2017) refer to SIA as an iterative process that focuses on individuals, groups, and communities; participatory that uses various forms of data and information, to produce value-based assessments and strategies to address the opportunities, risks, and uncertainties, associated with interventions whether carried out at the program, project or activity level.

This research intended to review the effectiveness and usefulness of the social responsibility program, conducted by PT Perusahaan Gas Negara Tbk (PGN) in Pagar Dewa Village, Lubai Ulu Sub District, Muara Enim District, South Sumatra Province. The process of program implementation measurement is carried out through Social Return on Investment (SROI).

SROI usage was selected because this tool offers a participatory framework for measuring social returns for beneficiaries and other relevant stakeholders. In addition, SROI tools can also be used by program owners to review the implementation and achievement of the program's goals. Nicholls (2007) mentions that SROI can assist in prioritizing resources in the planning and performance measurement stages. Likewise, as revealed in the research of Toor and Ogunlana (2010), one of the advantages of SROI is its ability to document the success criteria and expectations of stakeholders both qualitatively and quantitatively.

Material and Methods

The Return on Investment (ROI) is one of the ratios that can be used as a performance indicator to calculate investment. The level of ROI shows how much an investment generates a return for the company. Meanwhile, SROI as an analytical tool enables parties, particularly companies as program owners, to not only measure social impacts but also identify intangible effects. Below are several previous studies which utilized SROI:

Table 1. Previous researches

Researchers	Year	Title	Results
Jönsson, Jenny. Wikman, Anna. Wätthammar, Tina.	2011	Social Return on Investment (SROI), the value added for families before and after using Solvatten in the Bungoma district in Western Kenya	The SROI ratio of the program is 1:26 KES. Every 1 KES issued by the company, produces 26 KES. Calculations are based on 9 selected indicators over 5 years. The program is a Solvatten (energy-based) clean water supply.
Kennedy, Richard dan Philips, Jim.	2011	Social Return on Investment (SROI): A Case study with an expert patient program	The SROI ratio of the program is 1:6.09 pounds. The SROI method is carried out by evaluating the impact of the EPP (Ex-pert Patient Program) related to substance and alcohol abuse in the UK. The total Social Return obtained was 212.255 pounds and the total initial investment spent for the implementation of the program was 35,856 pounds.

To be continued…

Researchers	Year	Title	Results
Arvidson, Malin. Battye, Fraser. Salisbury, David.	2014	The social return on investment in community befriending	The SROI ratio of the program is 1:6.50 pounds. The SROI method is carried out by evaluating the long-term impact of PND (Post Natal Depression) on families who (1) face stress due to marriage; (2) loss of social support; and (3) being a single parent. This study was conducted in England.
Wijaya, Oki. Susanto, Deni Aditya, Rozaki, Zuhud. Nurhidayati, Ayu Pratiwi	2021	The Impact of Social Investment Toward The Implementation of CSR in Mushroom Agribusiness Development with Social Return on Investment	The SROI ratio of the program is 1:2.23 IDR. The SROI method is carried out by evaluating the Mushroom Agribusiness Development Program.
R. Suryani, A. Silfiana, N. Lathifah, and N. Ikhlas	2022	Measuring the Effect of Kampong AMOI Program on Sustainability Factors using Social Return on Investment Method: A Case Study of Riding Panjang Village, Bangka Barat	The SROI ratio of the program is 1:2.518 IDR. The SROI method is carried out by evaluating the impact of the Kampong AMOI (Integrated Agro-Independent) Program.

(Source: processed by author)

The social responsibility program of PT Perusahaan Gas Negara Tbk's had held during 2019 - 2021 in Pagar Dewa Village, Lubai Ulu Sub District, Muara Enim District, South Sumatra Province. Meanwhile, the research's fieldwork had held from November 1, 2021 to May 4, 2022, involving 74 relevant stakeholders from beneficiaries, regional government organizations, communities, and the company. The goal is to identify the magnitude of social, environmental, and economic values. Therefore, this paper used an evaluation approach for impact measurement.

Referring to Hart and Houghton (2007), and Lynch and Cooney (2011), the stages of the measurement process are described as follows: (1) contextualizing the program with the company's vision and mission, then detailing the activities and inputs. This process also includes mapping the stakeholders; (2) identifying the financial proxies and performing calculations on them; (3) identifying the indicators, as well as estimating the output and impact; (4) reducing the calculation of the impact using potential displacement, deadweight effects, attribution issues and drop off effects to get a monetary value that is close to the actual condition of the created impact; (5) to calculate the SROI ratio and perform sensitivity analysis to test the obtained results. Specifically for calculating the impact using SROI, the formulation is:

$$\text{SROI} = \frac{\text{Total Present Value of Impact/Benefit}}{\text{Total Initial Investment Value}}$$

$$= \frac{\text{Total Benefit x } \textit{Present Value Interest Factor}}{\text{Total Initial Investment Value}}$$

The framework for the 5 stages of calculating social impacts as mentioned above is described furthermore by Nicholls (2009) as follows Figure 1:

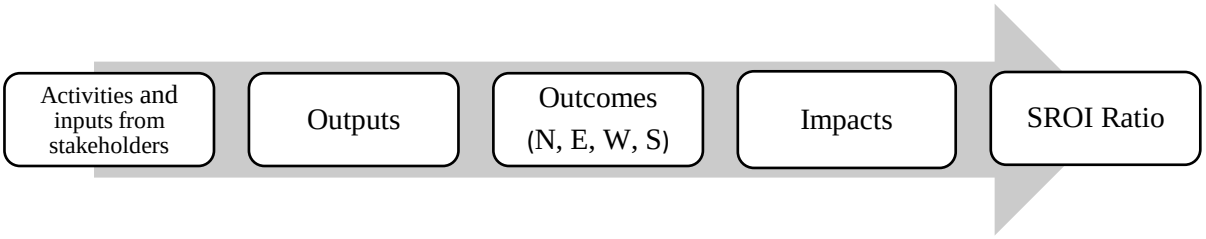

Figure 1. Stages of calculating the social impact
(Source: processed by author)

The research stage framework:

Table 2. Research framework

No.	Variables	Dimensions	Variable Description
1.	Stakeholders' Inputs and Activities		Everything that stakeholders do, to implement the activities (Community Sector Council, 2009). The indicators in this variable are: 1. Mapping the affected parties from the existence of the cooperative (*koperasi*) program 2. The form and nominal amount invested 3. Activities carried out by each party, affected by the program.
2.	Outputs		Quantitative summary of the results of activity (Community Sector Council, 2009). The indicator of this variable is the benefits obtained from the existence of the program.
3.	Outcomes		A change as a result of an activity (Community Sector Council, 2009). Outcomes can exist or not and can result in a positive or negative value. In this study, Outcomes were designed in 4 dimensions based on the Sustainability Compass initiated by Atkisson (2008)
		Nature	Represents the benefits obtained from the existence of the program in environmental aspects. The indicator in this variable is the presence and concern of stakeholders for environmental activities that are running in the program.
		Economic	Represents the benefits derived from the existence of the program in the economic aspect. The indicator in this variable is the economic changes (monetary and non-monetary) perceived by stakeholders from such cooperatives that run under the umbrella of the program.
		Wellbeing	The benefit derived from the existence of the program in terms of individual-level enjoyment.
		Society	The benefit derived from the existence of the program in the aspect of cohesion. The indicator in this varia-

To be continued…

No.	Variables	Dimensions	Variable Description
			ble is the expression of togetherness that is felt in society (in groups following the program). The results obtained can be presented in monetary and non-monetary forms.
4	Impact		The follow-up of outcomes that have been monetized is called impact. The impact is a description of an outcome of whatever will happen or be caused by other external factors and the time duration of the outcome's existence. Measuring the impact of an activity allows the analyst to know whether the activity is achieving its goals or not (Community Sector Council, 2009).
5	SROI Ratio		The results' calculation ratio of the social investment issued by the company.

(Source: processed by author)

Results and Discussion

The important role of companies in supporting social innovation in society has become a growing trend and is replicated by many organizations in responding to the challenges and needs of the community (Parikesit, 2016). Even in a more specific context, several studies have explored the extent to which social interventions carried out by certain organizations, affect the efficiency, quality, and responsiveness of services to the community Borzaga and Fazzi (2014) and Almeida (2017) because the altruistic behavior that emerges from the intervention can help organizations in achieving long-term benefits.

Following the stages of the SROI calculation process, in the first stage, researchers identified and mapped stakeholders. Based on its results, the parties involved consist of: (1) two representatives of the Waste Bank; (2) two representatives of the Rubber Cooperative; (3) two representatives of the Savings and Loan Cooperative; (4) two representatives of the Refill Water Supply business unit; (5) two representatives of the MSMEs; (6) two village government representatives; (7) three representatives of BUMDES administrators; (8) 73 people community representatives; and (9) one company representative. The tabulation of stakeholders and methods of engagement:

Table 3. Identification and mapping of stakeholders

No	Stakeholders	Respondents	Engaging Methods
1	PGN	1 people	a. Survey b. In-depth interview c. Field observation
2	Koperasi Karet (Rubber Cooperative)	2 people	a. Survey b. In-depth interview c. Field observation
3	Koperasi Simpan Pinjam (Savings and Loan Cooperative)	2 people	a. Survey b. In-depth interview c. Field observation
4	Waste Bank	2 people	a. Survey b. In-depth interview c. Field observation

To be continued…

No	Stakeholders	Respondents	Engaging Methods
5	Refill Water Supply	2 people	a. Survey b. In-depth interview c. Field observation
6	MSMEs	3 people	a. Survey b. In-depth interview c. Field observation
7	Village Government	2 people	a. Survey b. In-depth interview c. Field observation
8	BUMDES Management	3 people	a. Survey b. In-depth interview c. Field observation
9	Local Community	57 people	a. Survey b. In-depth interview c. Field observation
Total Respondents:		**74 people**	

(Source: processed by author)

In the second stage, researchers identify the outputs from the program implementation. The implementation of this stage is carried out with the third and fourth stages to build an impact map that is prepared based on stakeholder involvement, along with inputs, activities, outputs, outcomes, and impacts. This process is often referred to as the theory of change (TOC). An overview of the stages can be conveyed as follows in table 4:

Table 4. Identification of inputs, activities, outputs, outcomes, and impacts

Inputs	Activities	Outputs	Outcomes	Impacts
▪ Time ▪ Investment in the form of fund allocation for program implementation ▪ Human Resources	▪ Training ▪ Program supervision by local facilitators	▪ 12 times of training for each business unit in BUMDES ▪ 12 months group mentoring process involving 271 participants from various business units within BUMDES	▪ Increased knowledge and skills according to each business unit - this condition is recorded in the pre and post-tests of individual and group abilities (Well-being) ▪ Increased income of group members in each business unit with an average of 32% (Economy) ▪ Improved environmental quality as seen from the reduction in cases of health problems such as dengue fever by 23% (Nature and Economy) ▪ The establishment of a good relationship	▪ The establishment of governance in BUMDES ▪ Increasingly adequate community capacity - several local champions have successfully become tutors in activities in surrounding villages ▪ Community economic improvement ▪ Good quality of public health

To be continued…

	between the company and the community. It's shown through the reduced number of incidents or disturbances in the company's operational activities due to social factors to close to 0 cases (Society) ▪ Received several awards as an appreciation of the company's social performance along with positive news (Economy and Well-being)	▪ Increased cohesion between the community and the company ▪ Increased positive corporate image

(Source: processed by author)

Based on the TOC above, to show the transformation of input to impact, researchers identify the main impacts to find common ground. This process is carried out iteratively by conducting field observations, surveys, interviews, and literature reviews to examine perspectives on what has changed at a certain level. Then these results are verified by looking for evidence of changes, experienced by the parties. Researchers explore several alternative indicators. Furthermore, together with the subject matter expert, the researcher justifies the duration of the benefits and discusses the financial proxies for each outcome. In the impact process, the researcher also includes several elements of reducing the calculation using potential displacement, deadweight effects, attribution issues and drop-off effects to get the monetary value.

The SROI calculation based on the TOC:

Table 5. Calculation of social impact using SROI

No		Information	BUMDES DEWA SEJAHTERA		
			Year 1	Year 2	Year 3
1		**Inputs**			
	a	Investment Values	539.908.000,00	539.195.286,66	654.517.651,26
	b	Discount	5%	5%	5%
	c	PVIF BI average interest rate	1,05	1,1025	1,157625
	d	Total PV Investment	**514.198.095,24**	**489.066.019,65**	**565.396.956,06**
2		**Impacts**			
	a	Impact	2.584.075.404,00	3.958.667.250,00	4.810.849.500,00
	b	Deadweight	0%	0%	0%
	c	Attribution	0%	0%	0%
	d	Displacement	0%	0%	0%
	e	Drop-off	0%	0%	0%

To be continued…

	Total Impacts (after a-e)	2.584.075.404,00	3.958.667.250,00	4.810.849.500,00
	Discount	5%	5%	5%
	PVIF BI average interest rate	1,05	1,1025	1,157625
	Total PV Impact	2.461.024.194,29	3.590.627.891,16	4.155.792.678,98
	PV Investment Values	**514.198.095,24**	**489.066.019,65**	**565.396.956,06**
3	**SROI Ratio**	**3,79**	**6,34**	**6,35**

(Source: processed by author)

Referring to the results of the SROI calculation, in 2019 the SROI ratio was 1: 3.79, then in 2020 became 1: 6.34, and 1: 6.35 in 2021. The SROI Ratio value represents every 1 Rupiah invested by PGN, providing a social value of: (1) in 2019 Rp3.79; (2) in 2020 Rp6.34, and 2021 Rp8.02. The increasing trend in program implementation occurs because groups that continuously do the innovation, are under the umbrella of Village Owned Enterprises (BUMDES) Dewa Sejahtera which consists of Waste Banks, Rubber Cooperatives, Savings and Loans Cooperative, Refill Water Supply, Micro, Small and Medium Enterprises (MSMEs).

Conclusion

The purpose of implementing social responsibility programs is to ensure business sustainability without compromising the organization's ability to fulfill its social and environmental functions (Parikesit, 2016). In business, sustainability will ensure the company's existence in the future. The 1998 Nobel Prize in Economics winner, Amartya Sen in his book entitled Development of Freedom (Sen, 1998) suggests that the measure of a person's poverty is not judged by his shortcomings only, but also by his inability to realize his potential as a human being.

Taking into account the context and the results of the social mapping, the business activities carried out in the Dewa Sejahtera BUMDES are one of the choices taken in increasing income, health quality, cohesion, and resource capacity of the parties, especially the communities around the company's operational areas.

Referring to the results of the SROI calculation, in 2019 the SROI ratio was 1: 3.79, then in 2020 became 1: 6.34, and 1: 6.35 in 2021, meaning that social investment created a significant positive impact on the community.

In future programs, to ensure that program implementation continuously provides sustainable benefits, the search for social innovations is crucial and needs to be encouraged.

References

Aledo-Tur, A., & Domínguez-Gómez, J. A. (2017). Social Impact Assessment (SIA) from a multidimensional paradigmatic perspective: Challenges and opportunities. *Journal of Environmental Management, 195,* 56–61. Doi: 10.1016/j.jenvman.2016.10.060

Almeida, Á. S. (2017). The role of private non-profit healthcare organizations in NHS systems: Implications for the Portuguese hospital devolution program. *Health Policy, 121*(6), *699–707.* Doi: 10.1016/j.healthpol.2017.03.016

Arvidson, M., Battye, F., & Salisbury, D. (2014). The social return on investment in community befriending. *International Journal of Public Sector Management, 27*(3), 110-115.

Atkisson, A. (2008). *The ISIS Agreement: How Sustainability can improve organizational performance and transform the world*. London: Sterling, VA.

Barman, E. (2007). What is the bottom line for nonprofit organizations? a history of measurement in the british voluntary sector. *International Journal of Voluntary and Nonprofit Organizations, 18*(2), 101-115. Doi:10.1007/s11266-007-9039-3

Borzaga, C., & Fazzi, L. (2014). Civil society, third sector, and healthcare: The case of social cooperatives in Italy. *Social Science & Medicine, 123,* 234–241. Doi: 10.1016/j.socscimed.2014.10.001

Community Sector Council. (2009). *Social Return on Investment (SROI): Adapted from a guide to social return on ivestment,* UK Office of the third sector. NEF Consulting.

Flockhart, A. (2005). Raising the profile of social enterprises: the use of social return on investment (SROI) and investment ready tools (IRT) to bridge the financial credibility gap. *Social Enterprise Journal, 1*(1), *29–42.* doi:10.1108/17508610580000705

Hart, T., & Houghton, G. (2007). *Assessing the economic and social impact of social enterprise: Feasibility report*. Hull: Centre for City and Regional Studies, University of Hull.

Jönsson, J., Wikman, A., & Wätthammar, T. (2011). *Social return on investment, the value added for families before and after using solvatten in the bungoma district in Western Kenya*. Swedish University of Agricultural Sciences. value-added-for-families-before-and-after-using-solvatten-in-the-bungoma-district-in-western-kenya/

Kennedy, R., & Philips, J. (2011). Social Return On Investment (SROI): a case study with an expert patient programme. UK: Selfcare. *The journal of consumer-led health. 2*(1), 10-20

Kent, D., & Dacin, M. T. (2013). Bankers at the gate: Microfinance and the high cost of borrowed logics. *Journal of Business Venturing, 28*(6), 759–773. Doi: 10.1016/j.jbusvent.2013.03.002

Lynch-Cerullo, K., & Cooney, K. (2011). Moving from outputs to outcomes: A review of the evolution of performance measurement in the human service nonprofit sector. *Administration in Social Work, 35*(4), 117-123.

Moore, M. H. (2013). *Recognizing Public Value*. London: Harvard University Press.

Nicholls, A. (2009). We do good things, don"t we?': "Blended Value Accounting" in social entrepreneurship. *Accounting, Organizations and Society, 34*(6-7), 755–769. Doi: 10.1016/j.aos.2009.04.008

Nicholls, J. (2007). *Why measuring and communicating social value can help social enterprise become more competitive.* London: Cabinet Office.

Parikesit, B. (2016). *Analisis dampak program microfinance di PT X diukur menggunakan SROI*. Jakarta: Universitas Trisakti. Unpublished Thesis.

Sen, A. (1998). *Development of freedom*. New York: Anchor Book.

Suryani, R., Silfiana, A., Lathifah, N., & Ikhlas, N. (2022). Measuring the effect of kampong AMOI program on sustainability factors using social return on investment method: A case study of Riding Panjang Village, Bangka Barat. *Jurnal PresipitasiMedia Komunikasi dan Pengembangan Teknik Lingkungan, 19*(1),190-198. Doi.org/10.14710/presipitasi.v19i1.190-198

The Interorganizational Committee on Principles and Guidelines for Social Impact Assessment. (2003). Principles and guidelines for social impact assessment in the USA. *Impact Assessment and Project Appraisal, 21*(3), 231–250. DOI: 10.3152/147154603781766293

Toor, S.-R., & Ogunlana, S. O. (2010). Beyond the "iron triangle": Stakeholder perception of key performance indicators (KPIs) for large-scale public sector development projects. *International Journal of Project Management, 28*(3), 228–236. Doi: 10.1016/j.ijproman.2009.05.005

Vanclay, F., Esteves, A. M., Aucamp, I., & Franks, D. M. (2015). Social impact assessment: guidance for assessing and managing the social impacts of projects. *International Association for Impact Assessment,* 100-107.

Wijaya, O., Susanto, D. A., Rozaki, Z., & Nurhidayati, A. P. (2021). The impact of social investment toward the implementation of CSR in mushroom agribusiness development with social return on investment. *Jurnal Ekonomi Pertanian dan Agribisnis (JEPA), 5*(4), 1270-1279. Doi: 10.21776/ub.jepa.2021.005.04.28

Wilson, D., & Frederick Bull, M. (2013). SROI in practice: the Wooden Canal Boat Society. *Social Enterprise Journal, 9*(3), *315–325.* doi:10.1108/sej-03-2013-0013