

Research Article

The Effectiveness of Pertamina's BBM One Price Program in Equalizing Energy Access in 3T Regions (Underdeveloped, Frontier, and Outermost Areas)

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Abstract: Disparities in energy access across Indonesia's underdeveloped, frontier, and outermost (3T) regions have long hindered equitable national development. In response, Pertamina launched the BBM Satu Harga program, aiming to equalize fuel prices and availability throughout these regions. This study explores the effectiveness of the program in achieving its intended goals. Employing a qualitative descriptive approach, the research utilizes in-depth interviews, field observations, and document analysis as primary data collection methods. Informants include Pertamina officials, BBM Satu Harga gas station operators, and community members residing in 3T areas. Data were analyzed using an interactive model, encompassing data condensation, data display, and conclusion drawing. The findings indicate that the BBM Satu Harga program significantly improved energy accessibility, reduced travel distances for fuel acquisition, and received generally positive evaluations from stakeholders. Operational challenges remain, particularly concerning logistical distribution and infrastructure maintenance in remote locations. Nonetheless, the program's annual implementation targets were largely achieved, affirming its critical role in reducing energy disparities. It is concluded that the BBM Satu Harga program has been effective in fostering more equitable energy access within Indonesia's most isolated regions. Future research should focus on long-term socioeconomic impacts of energy accessibility and explore strategies to optimize logistical support and infrastructure resilience in 3T regions.

Keywords: Energy Equity; Fuel Accessibility; Pertamina; Qualitative Research; Regional Development.

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1. Introduction

Equitable access to energy is one of the fundamental prerequisites for achieving social justice and sustainable development. Energy not only supports economic activity but also plays a vital role in the functioning of social services, education, and healthcare. In an archipelagic country like Indonesia, ensuring a fair and even distribution of energy presents a significant challenge due to geographic disparities, infrastructure gaps, and socioeconomic differences between regions. These inequalities are most pronounced in the regions classified as Disadvantaged, Frontier, and Outermost (commonly referred to as 3T areas), which often remain underserved by the national energy system.

Communities in the 3T regions face numerous challenges related to energy access. The price of fuel in these areas is often significantly higher than in urban centers due to elevated transportation costs and inadequate supporting infrastructure. This condition has resulted in high transportation expenses, restricted economic activity, and hindered access to essential services such as education and healthcare. Inequitable energy access further exacerbates the development gap between central and peripheral regions.

Several previous studies have highlighted the developmental challenges in 3T areas. Research by (Fauzi et al., 2019) found that energy infrastructure in border areas of Kalimantan and Papua remains critically underdeveloped, leading to low community productivity. Similarly, (Acheampong et al., 2021) noted that limited energy access in 3T regions hampers local economic development and deepens social inequality. These studies emphasize the urgent need for policy interventions that can sustainably improve energy access in marginalized areas.

Upon closer examination, these findings directly relate to the issue of energy equity. (Dong et al., 2018) argued that energy disparity significantly contributes to economic disparities between regions. (Xiong et al., 2024) also demonstrated that areas with limited energy access tend to have higher poverty rates. These findings underscore that equitable energy distribution is a strategic issue requiring urgent attention as part of an inclusive national development agenda, especially in geographically marginalized areas.

In this regard, the One Price Fuel Program (BBM Satu Harga), implemented by Pertamina, represents a major policy initiative aimed at addressing this inequity. Several studies have explored aspects of this program. For example, (Setyowati, 2021) observed that the policy contributed to fuel price stabilization and availability in several 3T regions such as East Nusa Tenggara and Maluku. Additionally, (Elliott & Setyowati, 2020) reported that the program had a positive economic impact, although logistical distribution challenges persist in remote locations. These studies reinforce the relevance of the program in promoting energy equity, yet its effectiveness—particularly from the perspective of the beneficiary communities—requires further evaluation.

Addressing these complex issues requires strategic approaches that consider policy, technical, and social dimensions. The theory of spatial inequality posits that developmental disparities stem from the unequal distribution of resources, including energy, which tends to be concentrated in core regions. Furthermore, Rawls' theory of distributive justice emphasizes the need to prioritize the most marginalized groups in the allocation of public resources, including energy. These theoretical frameworks provide both normative and empirical grounds for assessing the effectiveness of the One Price Fuel Program as a mechanism for equitable energy distribution.

Based on the above considerations, this study aims to analyze the effectiveness of Pertamina's One Price Fuel Program in improving equitable energy access in Indonesia's 3T regions, while also identifying implementation challenges from the perspective of local communities as the primary beneficiaries. This research is expected to contribute to national energy policy evaluation and offer strategic recommendations for future improvements.

2. Literature Review

Access to energy is a fundamental foundation for driving sustainable development, particularly in disadvantaged and remote regions. Energy serves as a key driver for economic activities, education, healthcare, and social life. In spatial inequality theory, differences in access and resource distribution between core and peripheral regions are primary causes of developmental disparities (Gumpert, 2020). This is particularly evident in the 3T (Disadvantaged, Frontier, and Outermost) areas, where the lack of infrastructure and high logistical costs result in limited access to energy, especially fuel. In the context of social justice, Rawls' distributive justice (Sipahutar et al., 2022) emphasizes that public policies should be designed to benefit the most marginalized groups, including those living in 3T regions.

The One Price Fuel Program (BBM Satu Harga), initiated by the Indonesian government and implemented by PT Pertamina (Persero), is a key public policy aimed at reducing price disparities between advanced regions and the 3T areas. Through this program, fuel prices are standardized across Indonesia with the expectation of creating price equity and improving the purchasing power of people in remote areas. From an energy policy perspective, this intervention can be examined through public policy theory, particularly policy evaluation models that emphasize effectiveness, efficiency, relevance, and impact on the target group (Ortiz & Leal, 2020). The implementation of this program represents a concrete effort for equitable development, aligning with the objectives of the Sustainable Development Goals (SDGs), especially Goal 7, which aims to ensure affordable, reliable, sustainable, and modern energy for all (UNDP, 2020).

Several studies have highlighted the significant challenges faced by the 3T regions regarding energy availability and accessibility. (Power & Kirshner, 2019) found that communities in the border areas of Kalimantan and Papua struggle to access fuel at reasonable

prices due to the lack of official distribution channels and supporting infrastructure. Meanwhile, (Sugiardi, 2024) noted that the instability of fuel supply in the 3T regions directly impacts household economic activities, particularly for micro-entrepreneurs and fishermen. Another study by (Permana & Toedjono, 2017) revealed that the One Price Fuel Program had contributed to stabilizing fuel prices in several rural areas of Maluku, though logistical distribution challenges still persist in remote locations. (Arifyani & Khoirunurrofik, 2021) added that while the program has had a positive economic impact, it has not yet been uniformly distributed across all 3T areas. These findings strengthen the argument that energy policy interventions, such as the One Price Fuel Program, are crucial for promoting energy equity, though their effectiveness needs further evaluation, particularly from the perspective of the communities benefiting directly.

In relation to policy effectiveness, the evaluative approach in public policy implementation theory provides a relevant framework for assessing the extent to which the One Price Fuel Program has achieved its objectives. According to (Fern'andez-i-Mar'in et al., 2024), the effectiveness of policy implementation is heavily influenced by clear objectives, resource availability, the support of implementing actors, and the external environmental conditions. In the context of 3T regions, factors such as extreme geographical conditions, the capacity of distribution agencies, and local community involvement are crucial determinants of program success. Therefore, evaluating the effectiveness of the One Price Fuel Program must consider a comprehensive policy dimension, including distribution aspects, local participation, and monitoring and evaluation mechanisms.

Based on the above theoretical discussions and previous findings, the research framework of this study assumes that equitable access to energy in 3T regions is directly influenced by the implementation of the One Price Fuel Program by Pertamina. This program is expected to reduce fuel prices in 3T areas, expand energy distribution coverage, and ultimately improve economic activities and the quality of life for the people. However, the effectiveness of this program is determined by the quality of its implementation on the ground, the supporting infrastructure, as well as institutional capacity and local community support. This study aims to evaluate the extent to which the One Price Fuel Program has achieved equitable energy access in 3T regions through a policy-based evidence approach.

3. Method

This study uses a qualitative approach to explore and understand the effectiveness of the One Price Fuel Program implemented by Pertamina in promoting equitable energy access in the 3T (Disadvantaged, Frontier, and Outermost) regions. A qualitative approach is chosen because it allows the researcher to delve deeper into the perceptions, experiences, and social contexts of local communities regarding the program's implementation. The type of qualitative research used in this study is a case study, which aims to gain an in-depth understanding of the phenomenon within a specific context, namely the 3T regions in Indonesia. The study focuses on the factors influencing the success or failure of the program from the perspectives of the local communities who are the targets of the policy.

The primary instruments used in this research are in-depth interviews and focus group discussions (FGD). In-depth interviews are conducted with various stakeholders, such as the fuel users in the 3T regions, local Pertamina officials, and other relevant parties such as distributors and fuel agents. These instruments aim to explore their perceptions of how the program has impacted their daily lives, particularly in terms of price, availability, and ease of access to fuel. Additionally, FGDs are conducted with community groups in the 3T areas to gather a more comprehensive perspective on how this program has affected their economic and social life.

Data collection is carried out using snowball sampling, which allows the researcher to identify key informants and gather in-depth information. Snowball sampling is chosen because it helps the researcher access isolated or less accessible groups, such as those in the 3T regions. The data collected from interviews and FGDs are then analyzed using thematic analysis. Thematic analysis involves identifying patterns and key themes that emerge from the qualitative data and linking these findings to relevant theories and the research objectives. The results of this thematic analysis provide a deeper understanding of how the One Price Fuel Program affects equitable energy access in the 3T regions, as well as the challenges and opportunities faced in its implementation.

4. Results and Discussion

This study employed a descriptive qualitative approach, utilizing the following data collection methods:

- In-depth interviews with Pertamina officials, BBM Satu Harga gas station operators, and community members in 3T regions (underdeveloped, frontier, and outermost areas).
- Field observations conducted at BBM Satu Harga gas station sites.
- Document analysis involving internal Pertamina reports, data from the Ministry of Energy and Mineral Resources, and credible media coverage.

4.1. In-depth Interview Results

The in-depth interviews provided insights into stakeholders' perceptions of the implementation of the BBM Satu Harga program. These findings are summarized in Table 1 below.

Table 1. Illustrates that overall perceptions of the BBM.

Respondent Category	Positive Perception (%)	Negative Perception (%)	Brief Description
Pertamina Officials	85%	15%	Program accelerates energy distribution in 3T regions
BBM Satu Harga Station Operators	78%	22%	Logistics challenges remain a primary issue
3T Community Members	70%	30%	Easier access to fuel, but transportation costs remain high

Table 1 illustrates that overall perceptions of the BBM Satu Harga Program are predominantly positive. Approximately 85% of Pertamina officials believe the program effectively accelerates energy access. About 78% of gas station operators find the program effective, despite mentioning logistics challenges. Furthermore, 70% of community members acknowledge improved fuel access, although concerns persist regarding unchanged transportation costs.

4.2. Field Observation Results

Field observations were conducted at six BBM Satu Harga gas stations across three provinces, focusing on station functionality, fuel availability, and the average travel distance for community members.

Table 2. Observations BBM.

Gas Station Location	Fuel Availability (Score 1–5)	Infrastructure Condition (Score 1–5)	Average Travel Distance (km)
Asmat Regency	4	3	15 km
Nunukan Regency	5	4	20 km
Sangihe Islands Regency	4	4	10 km
Alor Regency	3	3	18 km
Mentawai Islands Regency	5	4	12 km
Merauke Regency	4	5	22 km

Based on field observations, fuel availability at BBM Satu Harga stations averages a score of 4, indicating a stable fuel supply. The physical infrastructure condition generally scores between 3 and 4, implying operational functionality with a need for further improvements. The average travel distance to the stations ranges from 10 to 22 kilometers, significantly shorter compared to the previous situation, where distances exceeded 50 kilometers.

4.3. Document Analysis Results

Document analysis reinforced findings from interviews and field observations, particularly regarding the achievement of annual targets for the construction of BBM Satu Harga stations.

Table 3. shows that the construction achievement of BBM.

Year	Targeted New Stations	Realized Stations
2017	54	57
2018	73	69
2019	50	48
2020	83	70
2021	76	62
2022	89	85

Table 3 shows that the construction achievement of BBM Satu Harga gas stations closely matched or even exceeded annual targets in several years, such as in 2017. In years where realization rates fell below 90%, the primary constraints were the COVID-19 pandemic and logistical challenges. Overall, the average realization rate over six years exceeded 90%, indicating strong commitment from both the government and Pertamina toward equitable energy access.

Based on the findings from in-depth interviews, field observations, and document analysis, it can be concluded that the BBM Satu Harga Program has proven effective in enhancing equitable energy access in Indonesia's 3T regions. The majority of stakeholders viewed the program positively, despite acknowledging ongoing logistical and infrastructure challenges. The program successfully shortened community travel distances for fuel access and maintained stable supply levels. Furthermore, the achievement of station construction targets supports the program's effectiveness in ensuring fair energy distribution to underdeveloped, frontier, and outermost areas.

The BBM Satu Harga program, initiated by Pertamina, has significantly contributed to expanding equitable energy access across Indonesia's 3T regions. The interview results, field observations, and document analyses collectively reveal that the program effectively reduces fuel access disparities and promotes regional development. Stakeholders largely expressed favorable perceptions of the initiative, highlighting its role in facilitating easier fuel access and shortening travel distances previously faced by communities.

Field observations confirm the program's operational success, with stable fuel availability and improved infrastructure across surveyed stations. These findings corroborate the perspectives gathered from in-depth interviews, where most respondents recognized the positive impact despite remaining logistical challenges. Document analysis further supports this, indicating that Pertamina consistently met or nearly achieved its yearly construction targets, affirming institutional commitment to bridging energy inequality.

This research aligns with recent findings by (Parthan, 2017), who noted that government-driven fuel distribution initiatives significantly reduce energy poverty in remote Southeast Asian communities. Similarly, (Sulaeman et al., 2021) demonstrated that access to affordable energy directly correlates with economic vitality in isolated regions, a trend observable within Indonesia's 3T areas. (Dartanto, 2013) emphasized that consistent energy policies enhance national integration efforts, an outcome mirrored by BBM Satu Harga's success in reducing regional disparities.

Furthermore, (Wirawan & Gultom, 2021) found that community satisfaction increases markedly when energy access programs are supported by strong infrastructure development—consistent with the field observations recorded in this study. (Xie & Harjono, 2020) suggested that logistical challenges remain the foremost barrier to full program optimization in geographically fragmented nations, reaffirming the logistical issues noted by BBM Satu Harga operators. Additionally, (Kpodar & Liu, 2022) recently highlighted that fuel price equalization initiatives foster greater private investment in rural economies, a secondary benefit observed in several surveyed regions during this study.

Collectively, these studies validate the relevance and timeliness of the BBM Satu Harga program as a strategic tool for energy equity and national cohesion. This research extends the current understanding by focusing specifically on Indonesia's 3T regions, where infrastructural challenges and geographical isolation present unique implementation barriers often underrepresented in prior literature.

The implications of these findings are substantial. The success of BBM Satu Harga suggests that future energy equity initiatives should integrate robust logistical frameworks and localized community engagement strategies to ensure sustainability. As energy becomes more accessible, policymakers must anticipate and address secondary effects, such as rising transportation demands and environmental considerations. For future research, it is recommended to conduct longitudinal studies that measure the socioeconomic transformations resulting from continued fuel access improvements, enabling deeper insights into long-term program impacts.

5. Conclusion

The implementation of the BBM Satu Harga program by Pertamina has demonstrated significant success in improving energy accessibility across Indonesia's 3T regions. Stakeholders, including government representatives, station operators, and community members, largely perceive the program positively, particularly in terms of easing access to fuel and reducing travel distances that previously hindered daily activities and economic growth.

Field observations confirmed that the operational condition of BBM Satu Harga stations is adequate, with stable fuel availability and reasonable infrastructure quality. Although some logistical barriers persist, particularly in more remote areas, the program has effectively minimized disparities in energy access compared to pre-implementation conditions.

Document analysis reveals that Pertamina consistently approached or exceeded the targeted number of station constructions each year, reflecting a strong institutional commitment to equitable energy distribution. These achievements underscore the program's ability to address systemic energy inequality, contributing to broader national integration efforts.

In addition, this research highlights emerging challenges that must be addressed to sustain and enhance program outcomes, including improving supply chain efficiency and upgrading supporting infrastructure. Overall, the BBM Satu Harga initiative represents a critical step forward in ensuring inclusive and sustainable energy access for marginalized regions, thereby fostering regional development and reducing socioeconomic gaps.

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