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# Digital Shift: An Evaluation of Indonesia's TV Digitalization Policy Implementation for Low-Income Families

**Titania**[1*]
Universitas Diponegoro, Indonesia

**Hartuti Purnaweni**[2]
Universitas Diponegoro, Indonesia

**Dyah Lituhayu**[3]
Universitas Diponegoro, Indonesia

**Maryono**[4]
Universitas Diponegoro, Indonesia

***Corresponding author:**
Titania, Universitas Diponegoro, Indonesia.
✉ titania89@students.undip.ac.id

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**Abstract**

**Background:** The Indonesian Omnibus Law Number 11 of 2020 mandates the transition from analog to digital television through an Analog Switch-Off (ASO) policy, necessitating the provision of set-top boxes (STBs) to facilitate this migration. The effective distribution of STB assistance is a crucial factor for the successful implementation of the ASO policy.
**Objective:** This study aims to evaluate the effectiveness of the Analog Switch-Off (ASO) policy implementation in Depok City by examining the accuracy, timeliness, adequacy, quality, and appropriateness of set-top box (STB) distribution to eligible low-income households.
**Methods:** This research adopts a descriptive qualitative approach to assess the effectiveness of the ASO policy implementation in Depok City, focusing on several dimensions: (1) target accuracy: ensuring that the STBs are distributed to the correct households; (2) timeliness: punctuality in the distribution process; (3) adequacy: sufficient provision of STBs to meet demand; (4) quality: ensuring the STBs meet the required standards; and (5) appropriateness of utilization: confirming that the STBs are used correctly by the beneficiaries.
**Results:** The study reveals that while the STB distribution program has made significant strides, several issues persist. The results suggest that enhanced coordination and support from all involved parties—including government agencies, local authorities, and distribution teams—are necessary to address these issues and improve the overall effectiveness of the program.
**Conclusion:** Strengthening these areas is essential for ensuring that the ASO policy achieves its intended outcomes and benefits low-income households as planned.

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## INTRODUCTION

Despite the rapid advancement of digital media, television remains the "star" of mass communication in Indonesia. This enduring appeal can be attributed to several key factors: free access, near-24-hour continuous broadcasting, and the inherent power of audiovisual content to captivate diverse audiences (Abdullah & Puspitasari, 2018; Gao, 2024; Sonni et al., 2025). As one of the most popular household electronic devices, television provides information to the general public across the country. It is no longer considered a luxury item but has become a necessity for families in both urban and rural areas. Since its premiere in Indonesia in 1962, television has maintained a strong cultural presence (Amelia, 2016; Putra, 2019).

In the current digital era, characterized by mobile and online media consumption, the television industry has not lost its market relevance. Nielsen Indonesia reported in 2022 that although internet penetration is growing rapidly (Nisa' & Rusfian, 2018), it has not replaced the role of television. Television continues to serve as a primary source of political and social information in daily life. The persistence of television dominance in the context of Analog Switch-Off (ASO) is particularly significant. If television remains the most widely accessed medium, then the transition from analog to digital broadcasting directly affects most citizens. This dominance may also reflect a structural digital divide, where access to internet-based platforms is uneven across socio-economic groups. Furthermore, continued reliance on television could indicate not merely preference, but potential technological resistance or limited digital literacy in certain communities. These structural dimensions make the ASO policy not only a technological shift but also a socio-economic transformation.

The significant role of television is evident in Indonesia's media landscape, predominantly characterized by the enduring dominance of television as the preferred medium for the public. This preference for television over reading has been a consistent trend in the country, with the television industry firmly established since the late 1980s (Briandana & Azmawati, 2021). The Nielsen research findings in the third quarter of 2022 revealed that while internet penetration in Indonesia had reached 76.7%, television penetration remained higher at 81.1%, highlighting the persistent preference for television as the most widely accessed medium in the country. This is further corroborated by data from the Badan Pusat Statistik (BPS) in 2021, which showed that an impressive 89.96% of the Indonesian population watched TV (Palumian et al., 2021). Despite some television programs losing their appeal, television continues to endure as a dominant medium, maintaining a loyal audience as one of the "elders" of mass media. These statistics are not merely descriptive; they imply that any broadcasting reform—particularly ASO—must account for television's embedded social function. A failure in migration policy could disproportionately affect those who rely exclusively on television for information access.

Furthermore, television continues to adapt to new trends and technologies, incorporating digital elements to enhance viewer engagement and broaden its reach. This adaptability has ensured that television remains a vital part of everyday life. The role of television in supporting education during the COVID-19 pandemic has been significant. It has emerged as a crucial educational medium, ensuring that students can continue their education despite the many challenges posed by the pandemic (Mishra et al., 2020). With schools closed and a shift to online education, television has become an important tool for delivering educational content to students (Farooqui et al., 2023). Television not only offers a platform for scheduled educational programming but also provides an accessible option for students who may lack access to other digital devices (Baroudi & Shaya, 2022). This is particularly important in regions where technology infrastructure and internet access are limited. Television can ensure that education remains accessible to all students, regardless of their socioeconomic status or geographical location (Tarrayo et al., 2023). Television has become a crucial medium for reaching remote and marginalized communities, where access to online education may be challenging (Bozkurt et al., 2020). By providing educational content through television, these students can continue their learning and maintain a sense of educational continuity during the pandemic.

After more than 60 years of relying on an analog broadcasting system, Indonesia's television industry entered a new phase in 2022 with the implementation of digital television. However, public awareness of broadcast digitization remains limited. This transition is a crucial effort to improve the quality of broadcasting in Indonesia, and the public, as a key stakeholder, must actively support this initiative (Albab et al., 2022). Digital television offers several advantages, including high-quality images and clear sound (Nurizar, 2020). Additionally, the digital broadcast system benefits communities in border, underdeveloped, and remote areas that have not previously received national broadcasts. With its wider range and advanced technology, digital television broadcasts can reach these underserved regions more effectively than analog television (Ariansyah & Wardahnia, 2021). This shift is important not only because it enhances the viewing experience but also because it supports the development of smart cities by providing a foundation for better access to information and services. Digitalization plays a crucial role in the smart city concept, emphasizing a shift from manual and analog technologies to digital systems, thus fostering greater efficiency and connectivity in urban environments (Alfian & Margono,

2023).

Until early 2022, only Indonesia and Timor-Leste among ASEAN countries had not migrated to digital television. Indonesia has faced significant challenges in transitioning from analog to digital TV, primarily due to resistance from major broadcasters that had heavily invested in analog technology. Efforts to revise Law No. 32/2002 on broadcasting, which was intended to serve as the legal framework for television digitalization, had stagnated for a decade without notable progress. Following the enactment of the Job Creation Law in 2020, which amended aspects of the 2002 Broadcasting Law, Indonesia set a timetable for Analog Switch-Off (ASO). The implementation of digital broadcasting must be expedited to ensure that Indonesia does not fall behind other countries. Indonesia is approximately seven years behind in adopting digital TV technology. Indonesia's transition to digital television broadcasting was fully realized after the passage of Law Number 11 of 2020 on Job Creation, or the Omnibus Law, on November 2, 2020. This law, in Paragraph 2 of Article 60A, states that analog television will be turned off within the next two years. ASO in Indonesia actually began in 2022, initially planned in three stages: the first on April 30, 2022; the second on August 25, 2022; and the third on November 2, 2022.

In implementing the migration from analog television to digital television, analog television sets owned by the general public will not be able to receive digital signals. Therefore, an additional device is needed that functions to convert digital signals into analog. This additional device is called a decoder or set-top box (STB). When ASO is implemented, people will not need to buy a new television, because analog televisions can receive digital television broadcasts with the help of an STB. The STB is the key for analog television users to be able to migrate to digital television services, so inevitably people have to buy an STB, which is not inexpensive. For the middle to upper economic class, buying an STB may not be a problem, but for low-income people, their priorities are more often directed toward purchasing basic necessities. Therefore, the government developed a policy as a follow-up to the ASO by providing free STBs for poor households. The implementation is regulated in the Decree of the Director General of Post and Informatics Number 65, Year 2022, on Technical Guidelines for Recipient Criteria, Provision, and Distribution Mechanisms and Supervision of the Implementation of the Distribution of Broadcast Receiving Aids (Set-Top Box) Derived from Government Assistance to Poor Households. The government anticipates that with the distribution of these STBs, individuals with analog televisions will be able to seamlessly transition to digital television broadcasts once analog signals are discontinued. The efficiency of this migration process is a key indicator of the success of the ASO program, as stipulated in Article 63, Paragraph (2) of the Minister of Communication and Information Technology Regulation Number 6 of 2021 regarding broadcasting operations.

In Indonesia, policy transitions have occurred several times, one notable instance being the conversion from kerosene to gas. This program was designed to reduce the country's reliance on kerosene and replace it with LPG (liquefied petroleum gas) as a more efficient and environmentally friendly household fuel. The transition involved the mass distribution of LPG cylinders and stoves to the public, along with educational campaigns on safe usage and the economic benefits of switching to gas. However, the program faced several challenges. One significant issue was public concern over the safety of using LPG. Reports of gas cylinder explosions surfaced, attributed to factors such as substandard cylinders, improper installation, or a lack of understanding of safe usage practices. These incidents created apprehension and distrust among the public regarding the use of LPG (Sugiyono & Adiarso, 2021). The transition, however, has not been without its complexities. The heavy dependence on fossil fuels makes the transition particularly difficult, and the lack of clear and binding instruments to encourage the transition has further compounded the challenge (Fajri et al., 2021). Despite these issues, the program has led to a significant decline in kerosene use and an increase in LPG adoption. Similarly, the transition to digital television in Indonesia has faced its own set of challenges, particularly in balancing industry interests with the need for broader reform and modernization. This digital shift aims to provide more efficient use of the broadcast spectrum, lower broadcasting costs, and new business opportunities (Ariansyah & Wardahnia, 2021).

A focal point in this transition has been the Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek) regions, which are known for their advanced infrastructure and large market. These areas are crucial for the successful implementation of the Analog Switch-Off (ASO) program, setting a precedent for the rest of the country. Notably, Depok City has achieved a milestone by distributing free digital TV set-top boxes (STBs) to 100% of eligible households. In accordance with the Decree of the Director General of Post and Information Technology Number 65 of 2022, the mechanism for distributing set-top box (STB) assistance is conducted door-to-door, delivering the STBs directly to recipients' home addresses. The beneficiaries are low-income households identified in the decree issued by the Directorate of Broadband Development. For the distribution of the STBs, the Ministry of Communication and Information Technology collaborates with a third party responsible for both the distribution and validation processes. The process begins with the delivery of STB logistics to the warehouse of the digital television organizer. Verification and validation of beneficiary data are carried out based on identification cards, family cards, and television ownership. If the data do not match, the STBs are returned to the warehouse. The final stage involves the handover of the STBs and their installation until they are functioning properly.

Previous studies have examined digital television migration from regulatory and technological perspectives. For instance, Feni Fasta et al. (2023) analyzed Indonesia's transition to digital broadcasting by emphasizing spectrum efficiency, regulatory challenges, and industrial restructuring, highlighting how digitalization improves broadcast quality and market competitiveness. Similarly, Sjuchro et al. (2023) investigated public awareness and policy readiness in the implementation of Analog Switch-Off (ASO), finding that limited socialization and uneven public understanding could hinder successful migration. While these studies provide valuable macro-level insights into policy frameworks and technological transformation, they primarily focus on institutional readiness and regulatory dynamics rather than on household-level implementation outcomes. The novelty of the present study lies in its micro-implementation approach, specifically evaluating the effectiveness of free set-top box (STB) distribution in Depok City by examining targeting accuracy, timeliness, utilization, and socio-economic impact among low-income households. Unlike prior research that frames ASO mainly as a technological or regulatory reform, this study positions ASO within the broader discourse of digital inclusion and policy implementation effectiveness, thereby offering empirical evidence on whether digital broadcasting migration truly mitigates or potentially reproduces structural digital inequality.

Research on the distribution of STBs within the context of the ASO policy in Indonesia is highly deserving of academic inquiry. The ASO policy represents a crucial transition in broadcasting technology from analog to digital, with significant implications for information access, digital inequality, and social inclusion, particularly among low-income households. The distribution of STBs is a key component of this policy, ensuring that all segments of society can benefit from digital broadcasting. However, challenges such as distribution accuracy, public acceptance of the technology, and socio-economic impacts remain underexplored in the existing literature. This research becomes increasingly relevant and urgent given the need to evaluate policy effectiveness, transparency in the distribution process, and the potential of technology to bridge the digital divide. By focusing on these aspects, this study not only offers new scholarly contributions but also provides practical recommendations for future policy improvements. The purpose of this study is to explore the implementation of the digital television set-top box (STB) distribution and utilization policy in Depok City. Given that the distribution of free STB assistance has fully covered all eligible households in Depok City, this assessment focuses on several key aspects: (1) target accuracy, (2) timeliness, (3) quantity accuracy, (4) quality, and (5) appropriateness of utilization. The research aims to provide a comprehensive overview of the distribution process and its impact on low-income households, offering insights into the program's success and areas for improvement. This research may also prove beneficial for similar assistance programs, especially those that are new to Indonesian society, by providing valuable lessons learned and strategies for effective implementation.

## METHOD

This research employed a descriptive study design utilizing a qualitative approach to explain and explore the implementation of the ASO policy through the distribution of STB assistance to low-income households. The study design is structured to provide a detailed examination of the phenomena, focusing on the real-world context of the policy's implementation. For data collection, a variety of qualitative methods were employed to gather comprehensive insights (Lester et al., 2020). These methods included in-depth interviews, direct observations, and document analysis. The study was conducted in Beji Urban Village, Pancoran Mas Urban Village, and Limo Urban Village, with a sample of 10 low-income households in each area. The research took place in December 2022, immediately following the ASO implementation in Depok City.

Purposive sampling was used to select participants who could provide the most relevant and rich information regarding the distribution and use of STBs. The inclusion criteria for household respondents were: (1) officially registered as STB assistance beneficiaries in the BNBA (By Name By Address) data issued by the Ministry of Communication and Informatics; (2) categorized as low-income households based on government social assistance criteria; (3) having received and installed the STB during the ASO implementation period; and (4) willing to participate voluntarily in the research. The sample included individuals who are directly involved or affected by the policy implementation, such as three village assistants, two social assistants from the Depok City Social Service, one Project Management Officer (PMO) from the Ministry of Communication and Informatics, two field officers from the STB distribution vendor, and thirty heads of low-income households who received STB assistance. These interviews aimed to capture the diverse perspectives and experiences related to the distribution and use of STBs.

The primary research instrument consisted of structured interview guides and observation checklists. The interview guides were designed to elicit detailed responses on the participants' experiences and perceptions regarding the STB distribution. The observation checklists were used to systematically document the conditions of the households, the presence of the STBs, and their functionality. This approach ensured consistency and comparability across the data collected.

To ensure data validity, the study employed triangulation of sources and methods. Source triangulation was conducted by comparing information obtained from household beneficiaries, village officials, social service officers, and distribution vendors. Method triangulation was applied by cross-checking findings from interviews with direct observations and official documents. Additionally, member checking was conducted selectively by confirming key findings with several respondents to reduce misinterpretation. Field notes were systematically compiled to document contextual insights, non-verbal cues, and researcher reflections, thereby strengthening data credibility.

In terms of analytic methods, the study employed thematic analysis to identify and interpret patterns and themes within the qualitative data. Thematic analysis was chosen for its flexibility and depth, allowing the researcher to delve into the nuances of the data. Additionally, a document study was conducted to supplement the primary data (Lochmiller, 2021). This included the analysis of BNBA (By Name By Address) data on the targeted low-income households and the specifications of the STBs distributed. Field notes were also meticulously compiled, capturing the researchers' observations, reflections, and interpretations following interactions with the participants. Overall, the research methodology is designed to provide a comprehensive understanding of the ASO policy's implementation and its impact on low-income households, combining qualitative data collection methods, structured research instruments, and robust analytic techniques.

## RESULTS AND DISCUSSION

### Results

The exploration of STB assistance distribution focuses on understanding the effectiveness of the distribution process. Effectiveness is measured by the accuracy of the distribution objectives. According to the Decree of the Director General of Post and Informatics Number 65 of 2022, the indicators for evaluating the accuracy of STB assistance distribution encompass: (1) target accuracy, (2) punctuality, (3) quantity accuracy, (4) quality, and (5) appropriateness of

utilization. These indicators collectively determine the effectiveness of the STB assistance provided by the government to low-income households in Depok City.

From an implementation perspective, these indicators are generally adequate to measure procedural and administrative effectiveness. They capture both distribution mechanics (accuracy, timeliness, quantity) and functional outcomes (quality and utilization). Nevertheless, the indicators also present limitations. First, they primarily assess short-term administrative compliance rather than long-term social impact, such as sustained digital inclusion or changes in information access patterns. Second, they do not explicitly measure beneficiary satisfaction, digital literacy readiness, or structural constraints that may influence utilization. Third, the indicators assume that correct delivery automatically leads to effective use, which may not always hold true in practice. Therefore, while the regulatory indicators provide a necessary evaluative framework, this study critically examines how these indicators function in practice and whether they sufficiently reflect the broader goals of digital equity within the ASO policy context.

*Target Accuracy*

Target Accuracy refers to the precision with which STB assistance is delivered to the intended beneficiaries. Research on the distribution of STBs to 30 low-income families in Pancoran Mas, Beji, and Limo Urban Villages revealed that the selected recipients were aligned with the proposal from the Mayor of Depok City, as outlined in the Decree of the Mayor of Depok City. All 30 recipients had not previously received STB assistance, indicating that there was no duplication of assistance from Broadcasting Institutions or Local Governments. Despite overall compliance, discrepancies were noted. Specifically, four beneficiaries (H1, H2, H3, and H4) did not meet the established criteria for STB assistance. The requirements and mechanisms for determining recipients, as stipulated by the government, include:

a. Ownership of an analog television set, preferably used for terrestrial television broadcasts.
b. Residence within the coverage area of digital television broadcast services via terrestrial. Table 1 provides a detailed overview of the cases involving H1, H2, H3, and H4.

**Table 1.** Issues in Target Accuracy

| No | Respondent | Issue |
|---|---|---|
| 1 | Household 1 (H1) is a self-employed individual operating a grocery and small food stall from their residence. | During the field officer's visit for STB distribution, H1 declined the STB assistance, as they did not possess a television, either analog or digital. Despite this, H1 was recorded as a recipient on the social assistance verification page (https://cekbantuanstb.kominfo.go.id/) as of December 15, 2022. The Project Manager Officer from the Ministry of Communication and Informatics indicated that there might have been a transfer of beneficiaries, though the verification page had not been updated. |
| 2 | Households 2 (H2) and 3 (H3) were unaware that their televisions were already digital | Upon installation, the field officer did not verify whether the televisions were digital or analog. Consequently, when the STBs were installed, the picture quality was poor. H2 and H3 later realized their televisions were digital and thus did not require STBs. They ultimately gave the STBs to others who were in greater need. |
| 3 | Household 4 (H4) was aware that they already had a digital television and did not need an STB. | Despite this, the STB was still provided to H4 because their name appeared on the beneficiary list. As per the criteria for STB assistance, H4 should not have received the STB as they did not own an analog TV. |

Source: Researcher's Data, 2022

*Punctuality*

Punctuality refers to adherence to scheduled timelines for the distribution of assistance. Based on the aspect of punctuality, the research findings indicate that the distribution of STBs in Depok City did not fully adhere to the scheduled timeline. Specifically, five STBs were distributed later than the implementation date outlined in the order letter. The distribution was finalized within the ASO cessation timeframe; however, temporal compliance should be distinguished from policy effectiveness, which requires evaluation beyond procedural completion. The assessment of punctuality in the STB distribution process was based on a review of the STB Vendor's Minutes and the Order Letter for the Provision and Distribution of STBs, in accordance with the ASO schedule outlined in the Minister of Communication and Information Technology Regulation Number 11 of 2021. Out of the 30 STBs distributed to low-income households, five STBs were distributed later than planned.

The delays in STB distribution were not merely the result of beneficiaries being absent or difficulties in locating addresses. Rather, these issues point to deeper structural and administrative weaknesses in the implementation process. The absence of beneficiaries during delivery attempts may reflect inadequate prior notification mechanisms, limited coordination between local authorities and recipients, or the precarious working conditions of low-income households who are often engaged in informal labor outside the home during standard delivery hours. Similarly, difficulties in locating beneficiary addresses suggest potential inaccuracies in the BNBA database, weak data verification procedures, or inconsistencies in civil registration records. These underlying factors indicate that the delays were not simply logistical obstacles, but symptoms of broader data governance and communication gaps within the policy implementation framework.

To mitigate such delays and ensure smooth distribution, the Head of the Communication and Informatics Office of Depok City directed the Heads of Sub-Districts and Villages to facilitate the distribution process within their respective areas. Despite these efforts, the delays did not extend beyond November 2, 2022, the date when analog television broadcasts were simultaneously ceased across all areas of Depok City.

*Quantity Accuracy*

Quantity Accuracy pertains to ensuring that the number of Set-Top Boxes (STBs) distributed aligns with the allocated amount. The distribution adhered to the allocation plan, with each beneficiary household expected to receive one STB. However, two beneficiaries did not receive their allocated STBs. This issue arose due to the field officers' lack of up-to-date knowledge about the types of televisions that require STBs, as not all flat-screen televisions are digital. One criterion for receiving STB assistance was owning an analog television set.

In this case, although the distribution plan was followed, two households did not receive their designated STBs. Detailed information on these cases is provided in Table 2, which outlines the situations involving Households 5 (H5) and 6 (H6).

**Table 2.** Issues in Quantity Accuracy

| No | Respondent | Issue |
|---|---|---|
| 1 | Household 5 (H5) | Household understanding:<br>• Both H5 and H6 were unaware of the specific requirements for receiving digital TV signals and the need for STBs with flat-screen televisions.<br>• They did not dispute the information provided by the field officers due to shared misunderstandings.<br>Field Officers' Knowledge:<br>• The field officers lacked adequate knowledge about digital and analog televisions, which contributed to the misunderstanding. Upon installation, field officers incorrectly presumed that H5 and H6's flat-screen televisions were digital and did not require STBs. |
| 2 | Households 6 (H6) | |

Source: Researcher's Data, 2022

Household 5 (H5) in Beji Urban Village and Household 6 (H6) in Limo Urban Village had their Set-Top Boxes (STBs) reassigned to other households because their televisions were flat screens. The field officer incorrectly assumed that STBs were only necessary for tube televisions, leading to the transfer of these STBs to other individuals. Interviews and observations confirm that STBs were initially distributed to the homes of H5 and H6. However, during installation, the field officers mistakenly believed that the flat-screen televisions of H5 and H6 were digital televisions and therefore did not require STBs to receive digital TV signals.

H5 and H6 did not challenge this information as they shared the same understanding as the field officers. Additionally, both households were unaware of the characteristics of digital televisions and the requirement for STBs to access digital broadcasts. The lack of understanding among both the STB field officers and the households was compounded by the fact that analog TV signals had not yet been discontinued at the time of distribution, so the implications of lacking an STB had not yet been experienced. It was only on November 2, 2022, that it became apparent that the flat-screen televisions in both H5 and H6 were analog and required STBs to function.

When contacted, H5 and H6 indicated that they accepted the information provided by the field officers and expressed hope for future government assistance in providing STBs. Observations revealed that H5 had subsequently purchased an STB independently; however, H6 had not acquired one by the time of observation, and her television has remained inoperative since November 2, 2022, following the ASO.

As a result, certain households that were supposed to receive STB assistance were unable to benefit from the distribution program, and consequently could not access digital TV broadcasts when the ASO took effect. It is imperative that the vendor provides adequate training to field officers to ensure that their lack of knowledge does not disadvantage potential beneficiaries.

*Quality Accuracy*

Quality accuracy involves ensuring that the STBs conform to the specified standards and specifications. Based on the research conducted on the STB distribution in Depok City, the STBs provided were consistent with the specifications outlined in the Order Letter. Observations confirm that the STBs distributed to poor households met the required standards. Each package contained the STB unit, an adapter, an RCA cable, a remote control, batteries, a warranty card, and a user manual, all of which were in accordance with the specifications detailed in the Order Letter.

*Appropriateness of Utilization*

Appropriateness of utilization refers to assessing whether the STBs are used effectively by the recipients. To ensure proper functionality, it is essential to use the STB in accordance with the user manual. Every electronic device, including digital TV STBs, can malfunction if not properly maintained. Adhering to the user manual, ensuring proper cleaning, and maintaining a safe, stable electrical current are crucial for the STB's safety and longevity. To avoid damage, keep STBs away from heat sources such as direct sunlight and other electronics, and do not place them on top of TVs, which also generate heat. Additionally, turning off the STB when not in use is important to prevent overheating and prolong the device’s lifespan.

Recent reports and rumors about Set Top Box (STB) explosions have significantly impacted public trust in the STB migration process. Incidents such as the reported explosion in a resident's home in Serang Regency and false claims on social media about an STB explosion causing fatalities in Taman Cikande Housing, Tangerang Regency, have fueled public fear. Additionally, a misleading post linked a laundry business fire in Cikande Village to an STB explosion, further contributing to public apprehension. These reports have led to widespread fear and anxiety, decreasing confidence in the safety and reliability of STBs.

Based on the results of monitoring the utilization of STBs distributed to the households sampled, there were 4 households that were not utilized as intended for several reasons, as summarized in Table 3.

**Table 3.** Issues in Appropriateness of Utilization

| No | Respondent | Issue |
|---|---|---|
| 1 | Households 7 (H7) | Installation difficulties due to a mismatch between demonstration and actual television specifications. |
| 2 | Households 8 and Household 9 (H8 and H9) | Sold STBs due to overheating concerns and media reports of explosions. |
| 3 | Households 10 (H10) | STB stored due to TV damage from lightning and safety concerns about potential explosions. |

Source: Researcher's Data, 2022

During the observation by the researcher, H7 revealed that the STB provided to H7 could not be used with their tube television from the outset. The STB distribution was managed centrally through the neighborhood head rather than a door-to-door approach. The households, including H7, gathered at the neighborhood head's residence for installation instructions. The STB was installed using the neighborhood head's television, assuming the installation method would be the same for all, despite varying television specifications among the households. Consequently, H7 encountered difficulties with installation as their television did not match the installation method demonstrated. This discrepancy meant that H7 and some other households were unable to install the STB. There is a strong possibility that the STB will remain unused.

Unlike H7, the field officers conducted door-to-door STB installations for H8 and H9. However, observations revealed that the brand and specifications of the STBs for H8 and H9 differed from those initially intended for distribution. Interviews disclosed that the STBs were initially in good condition, but H8 and H9 noticed that the STBs began to overheat after a few days of use. Media reports about exploding STBs heightened their concerns, leading H8 and H9 to fear similar incidents. To mitigate this risk, both households decided to sell their STBs for IDR 180,000.00 and replace them with what they perceived to be higher-quality STBs for IDR 280,000.00.

The distribution process for H10 proceeded smoothly, with field officers assisting in installing the STB on H10's tube television. H10 was able to access digital television broadcasts. However, during a heavy rainstorm, H10's television was struck by lightning, potentially due to the television cable remaining in the electrical socket. H10 prioritized unplugging the STB over the television cable due to concerns about the STB exploding, a fear exacerbated by negative rumors. Ironically, it was the television that was struck by lightning. Consequently, H10 stored the STB safely until funds became available to repair the damaged television or purchase a new one.

## Discussion

*Evaluation of Distribution Effectiveness Indicators*

From an implementation perspective, the five indicators outlined in the Decree of the Director General of Post and Informatics Number 65 of 2022 are generally adequate to measure procedural and administrative effectiveness. They capture both distribution mechanics (accuracy, timeliness, quantity) and functional outcomes (quality and utilization). Nevertheless, the indicators also present limitations. First, they primarily assess short-term administrative compliance rather than long-term social impact, such as sustained digital inclusion or changes in information access patterns. Second, they do not explicitly measure beneficiary satisfaction, digital literacy readiness, or structural constraints that may influence utilization. Third, the indicators assume that correct delivery automatically leads to effective use, which may not always hold true in practice. Therefore, while the regulatory indicators provide a necessary evaluative framework, this study critically examines how these indicators function in practice and whether they sufficiently reflect the broader goals of digital equity within the ASO policy context.

*Delays in STB Distribution: Structural and Administrative Weaknesses*

The delays in STB distribution were not merely the result of beneficiaries being absent or difficulties in locating addresses. Rather, these issues point to deeper structural and administrative weaknesses in the implementation process. The absence of beneficiaries during delivery attempts may reflect inadequate prior notification mechanisms, limited coordination between local authorities and recipients, or the precarious working conditions of low-income households who are often engaged in informal labor outside the home during standard delivery hours. Similarly, difficulties in locating beneficiary addresses suggest potential inaccuracies in the BNBA database, weak data verification procedures, or inconsistencies in civil registration records. These underlying factors indicate that the delays were not simply logistical obstacles, but symptoms of broader data governance and communication gaps within the policy implementation framework.

*Barriers to Effective STB Utilization*

Based on the evaluation of STB assistance usability, research into the distribution of STBs in Depok City revealed several issues affecting their usage. Specifically, some STBs were not utilized by recipients due to problems related to the distribution method and the quality of the STBs. The distribution process did not comply with the Decree of the Director General of Post and Information Technology Number 205 of 2022, Chapter IV, point B, number 2(f), which mandates that STB assistance be delivered directly to the recipient's home address. In certain areas, the distribution and installation were not performed door-to-door, contrary to the commitment outlined in the Order Letter. The Order Letter specifies that the provider's responsibilities include preparing the STB device for installation, installing it on the recipient's television, and ensuring that it functions correctly.

To ensure proper functionality, it is essential to use the STB in accordance with the user manual. Every electronic device, including digital TV STBs, can malfunction if not properly maintained. Adhering to the user manual, ensuring proper cleaning, and maintaining a safe, stable electrical current are crucial for the STB's safety and longevity. To avoid damage, STBs should be kept away from heat sources such as direct sunlight and other electronics, and should not be placed on top of TVs, which also generate heat. Additionally, turning off the STB when not in use is important to prevent overheating and prolong the device's lifespan.

Recent reports and rumors about Set-Top Box (STB) explosions have significantly impacted public trust in the STB migration process. Incidents such as the reported explosion in a resident's home in Serang Regency and false claims on social media about an STB explosion causing fatalities in Taman Cikande Housing, Tangerang Regency, have fueled public fear. Additionally, a misleading post linked a laundry business fire in Cikande Village to an STB explosion, further contributing to public apprehension. These reports have led to widespread fear and anxiety, decreasing confidence in the safety and reliability of STBs.

*Policy Implications and Recommendations*

The fundamental objective of the Set-Top Box (STB) distribution program is to ensure that STBs are effectively distributed to provide significant benefits to recipients. This involves not only delivering the STBs accurately as per the allocation but also ensuring they meet the required standards and specifications. The ultimate goal is for these STBs to be practically useful, facilitating access to digital television broadcasts for beneficiaries. However, issues have arisen that prevent some beneficiaries from utilizing the STBs effectively. These issues include unfamiliarity with the installation procedures for analog TVs and uncertainty about the condition of the received STBs. Given the recent concerns about STBs exploding, there is a heightened caution among the public regarding their use. This caution may lead to reluctance in accepting and using the STBs, potentially impeding the transition to digital television. To address these challenges, the government must ensure rigorous quality control of STBs, given their critical role for poor households. Additionally, there is a need for comprehensive socialization to inform the public about the benefits and proper use of STBs. This can be achieved through widespread awareness campaigns involving local governments, institutions, and community leaders. Strengthening community literacy on filtering misinformation and hoaxes is also crucial (Ahmad & Hardianti, 2020).

Observations and interviews reveal several misconceptions among poor households regarding the STBs and the ASO policy. These include concerns about monthly charges, the need for internet connectivity, misunderstandings about digital TV specifications, and fears of STBs being explosive. This research underscores the importance of consumer awareness and knowledge in facilitating a successful transition to digital television. It highlights the need for intensified and expansive public information campaigns, utilizing both face-to-face interactions and mass media channels. Effective implementation of the ASO hinges on addressing these concerns and fostering a well-informed public. It is imperative that the vendor provides adequate training to field officers to ensure that their lack of knowledge does not disadvantage potential beneficiaries.

## CONCLUSION

This study demonstrates that the effectiveness of the Analog Switch-Off (ASO) policy cannot be assessed solely through administrative claims of distribution completion, but must be evaluated through implementation quality, targeting precision, and actual household utilization. By examining STB distribution at the micro-implementation level, this research contributes to the digital governance and policy implementation literature by showing that technological transition programs function not only as infrastructure projects but also as instruments of social inclusion that may either reduce or reproduce digital inequality. The findings imply that policy success depends on strengthening beneficiary data governance, improving inter-agency coordination, establishing pre-distribution communication mechanisms, and incorporating post-distribution monitoring to verify functional usage rather than assuming compliance from delivery statistics alone. These insights extend beyond the ASO context and are relevant for future technology-based social assistance programs in Indonesia. Nevertheless, this study is limited by its geographic concentration in three urban villages and its focus on the early phase of implementation, which does not capture long-term behavioral adaptation or sustained digital inclusion outcomes. Future research should adopt comparative regional designs, incorporate longitudinal approaches, and examine how digital literacy, trust in government programs, and socio-economic vulnerability influence technology adoption after policy rollout. Such directions would provide a more comprehensive understanding of whether digital broadcasting migration ultimately fulfills its broader objective of equitable information access.

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