

Bridging Psak 69 and Smallholder Plantation Accounting: Fair Value Constraints and Simplified Reporting

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Abstract. The gap between PSAK 69, which requires biological assets to be measured using fair value, and accounting practices in Indonesian smallholder plantations indicates significant implementation constraints, particularly in relation to data availability, recording capacity, and market conditions. This study aims to systematically synthesize the literature to identify the main barriers to PSAK 69 implementation and to formulate a simplified and contextual reporting design. The study employs a Systematic Literature Review (SLR) guided by the PRISMA 2020 framework. Literature was retrieved from Scopus, Google Scholar, Garuda, SINTA, and Neliti. Articles were selected using predefined inclusion criteria, namely publication between 2014 and 2026, written in Indonesian or English, available in full text or with complete metadata, and relevant to PSAK 69 and biological assets. Of the 210 records initially identified, 40 articles were included in the final synthesis. The selected studies were analyzed using thematic analysis. The findings indicate that fair value constraints are associated with inactive markets, price volatility, proxy pricing, and high appraisal costs. These constraints are reinforced by limited biological data and weak recording capacity among small-scale actors. Institutional support also plays an important role in facilitating data availability and improving reporting quality. Based on these findings, this study proposes a tiered simplified reporting model as an implementable approach to bridge PSAK 69 requirements and accounting practices in smallholder plantations in a gradual and contextual manner.

Keywords: Biological Assets; Fair Value; PSAK 69; Simplified Reporting; Smallholder Plantations.

Received: April 27, 2026
Revised: May 29, 2026
Accepted: June 01, 2026
Published: June 11, 2026
Curr. Ver.: June 11, 2026



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1. Introduction

Smallholder plantations play a strategic role in the Indonesian economy as producers of major agricultural commodities and as a source of livelihood for many small-scale actors. However, business management at the smallholder level is generally constrained by limited financial recording and reporting systems. These systems tend to be simple, non-standardized, and poorly documented. Such conditions reduce the quality of financial information and limit

its usefulness for decision-making and access to formal financing (Korompis, 2016; Mulawarman, 2014).

These limitations are particularly relevant in the context of PSAK 69 Agriculture, which regulates the recognition, measurement, and disclosure of biological assets using fair value less costs to sell (Ikatan Akuntan Indonesia [IAI], 2015). This standard requires adequate biological data and the technical capacity to estimate fair value reliably. In practice, however, especially in smallholder plantations, the application of fair value measurement faces various constraints, including inactive markets, price volatility, limited data, and high appraisal costs and complexity (Hidayat, 2018; Puspitasari et al., 2023).

This situation reveals a clear gap between the normative requirements of the standard and field-level accounting practices. PSAK 69 emphasizes fair value measurement to enhance the relevance of financial information, whereas many small-scale actors do not yet have the prerequisites necessary to apply this approach adequately. Moreover, previous studies on PSAK 69 remain fragmented across different focuses, such as measurement, disclosure, firm value, and comparative accounting treatment, and have not yet provided an integrated synthesis that connects these findings into a coherent framework (Alfarisyi et al., 2022; Lestari et al., 2019; Lisnawati & Herawati, 2022; Meilansari et al., 2019; Pratiwi et al., 2018; Rahmawati & Apandi, 2023; Rochman et al., 2025; Suminar & Hartoko, 2025).

Accordingly, this study conducts a Systematic Literature Review (SLR) to identify and synthesize research findings related to PSAK 69 implementation in Indonesia. Specifically, the study aims to: (1) identify the main barriers to fair value measurement of biological assets, (2) analyze factors that shape implementation constraints, and (3) formulate a simplified reporting design that can bridge the requirements of PSAK 69 and field practices. The literature collection and selection processes follow the PRISMA 2020 framework to ensure transparency and replicability (Page et al., 2021).

This study contributes both theoretically and practically. Theoretically, it provides an integrated synthesis of PSAK 69 implementation in Indonesia by positioning fair value constraints as the central issue linked to data, capacity, and ecosystem factors. Practically, it offers a staged simplified reporting framework that can serve as a reference for developing more contextual and implementable reporting practices in Indonesian smallholder plantations.

2. Research Methodology

Research Design and Approach

This study uses a Systematic Literature Review (SLR) guided by PRISMA 2020 to ensure that the processes of identification, selection, eligibility assessment, and inclusion of articles are transparent and systematic (Page et al., 2021). The review focuses on PSAK 69 Agriculture implementation in Indonesia, particularly fair value measurement constraints for biological assets and their implications for simplified reporting design (IAI, 2015; IAI, n.d.).

Data Sources and Search Databases

Literature searches were conducted in international and national databases to capture both reputable publications and locally relevant Indonesian studies. The databases used were Scopus, Google Scholar, Garuda, SINTA, and Neliti. The publication period was set from 2014 to 2026 to capture early conceptual literature related to IAS 41 as well as studies published before and after the effective implementation of PSAK 69 (IAI, 2015; Mulawarman,

2014). The document types included were peer-reviewed journal articles and scientific conference proceedings. Comparative literature on accounting treatment before and after PSAK 69 was also used as a conceptual reference (Rahmani et al., 2021).

Search Strategy and Keywords

The search strategy combined Indonesian and English keywords using Boolean operators (AND/OR) and relevant synonyms to capture studies on PSAK 69, biological assets, fair value, measurement, recognition, disclosure, accounting treatment, compliance, depletion, impairment, plantations, agricultural companies, and Indonesia. To ensure consistency across databases, search strings were adapted to the syntax of each platform. Examples of search strings included:

("PSAK 69" OR "IAS 41") AND ("aset biologis" OR "biological assets") AND ("nilai wajar" OR "fair value") AND "Indonesia"

("pengungkapan" OR "disclosure") AND ("aset biologis" OR "biological assets") AND "PSAK 69" AND "Indonesia"

("perlakuan akuntansi" OR "accounting treatment") AND ("PSAK 69" OR "IAS 41") AND ("perkebunan" OR "agrikultur") AND "Indonesia"

("deplesi" OR "depletion" OR "penurunan nilai" OR "impairment") AND ("aset biologis" OR "biological assets") AND ("PSAK 69" OR "IAS 41") AND "Indonesia"

Inclusion and Exclusion Criteria

Articles identified through the search process were selected using predefined inclusion and exclusion criteria to ensure that the studies analyzed were closely aligned with the focus of this review.

Table 1. Inclusion and Exclusion Criteria for Article Selection

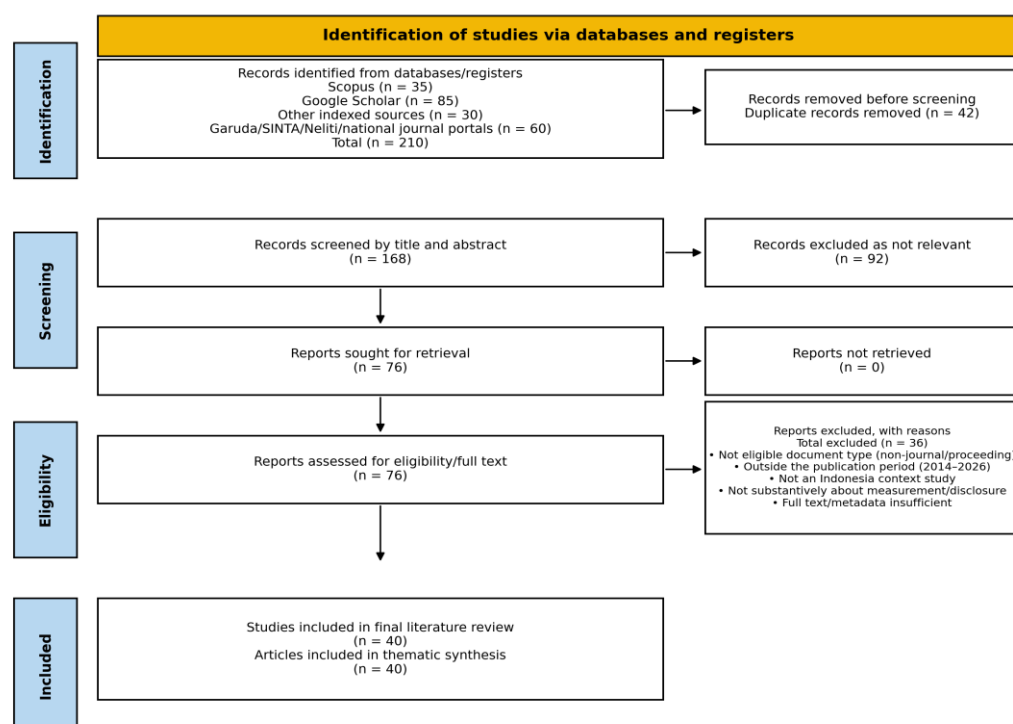
Aspect	Inclusion Criteria	Exclusion Criteria
Document type	Peer-reviewed journal articles and scientific conference proceedings.	Undergraduate theses, master's theses, dissertations, popular books, opinion pieces, news articles, blogs, non-proceeding working papers, and documents without clear publication information.
Publication year	Publications from 2014 to 2026.	Publications before 2014.
Language	Indonesian or English.	Other languages that could not be adequately analyzed.
Study focus	Studies discussing PSAK 69 and/or IAS 41 related to biological assets, including recognition, measurement, fair value, disclosure, compliance, depletion, or impairment.	Agricultural production or agronomy studies without a link to accounting or reporting for biological assets; studies that only mention PSAK 69 without substantive discussion.
Study location/context	Indonesian context, including research objects, data, settings, or direct implications for reporting practices in Indonesia.	Non-Indonesian studies without direct relevance to PSAK 69 implementation in Indonesia.

Accessibility	Full text available or at least complete abstract and metadata for initial assessment, with priority given to full-text studies at the eligibility stage.	No full text and insufficient or unverifiable metadata.
Substantive relevance	Studies containing findings or analyses on fair value constraints, alternative measurement practices, disclosure quality, compliance level, or reporting improvement recommendations.	Studies with no findings that could be synthesized or studies that did not address the SLR focus.

Article Selection Procedure Based on PRISMA

The article selection process was conducted through four PRISMA stages: identification, screening, eligibility, and inclusion. At the identification stage, the initial search yielded 210 records from several databases: 35 from Scopus, 85 from Google Scholar, 30 from other indexed sources, and 60 from Garuda, SINTA, Neliti, and national journal portals. After duplicate checking, 42 duplicate records were removed, leaving 168 records for screening. During title and abstract screening, 92 records were excluded because they were not relevant to the focus of the review, and 76 reports proceeded to full-text retrieval. All 76 reports were retrieved and assessed for eligibility. At this stage, 36 reports were excluded because they did not meet the eligibility criteria, including inappropriate document type, publication outside the selected period, non-Indonesian context, lack of substantive discussion on measurement or disclosure, or insufficient full text/metadata. Finally, 40 articles were included in the final literature review and thematic synthesis.

Figure 1. PRISMA flow diagram of study selection and screening process



Data Extraction and Data Analysis Technique

The 40 included articles were systematically extracted using a data extraction form designed to ensure consistency and completeness. The form captured study identity (authors, year, title, and publication outlet), context and research object, research design and method, PSAK 69 aspects discussed (recognition, measurement, and disclosure), key findings related to fair value constraints or alternative measurement practices, and implications or recommendations relevant to simplified reporting design.

Data were analyzed using thematic analysis. Findings from each study were first coded based on emerging issues, such as measurement basis, active market availability, appraisal costs, biological data limitations, and disclosure quality. Similar codes were then grouped into subthemes and synthesized into broader themes to explain patterns, gaps, and practical and policy implications. The main themes used in the synthesis were: fair value constraints; recognition and measurement practices for biological assets; disclosure quality and determinants; impacts on information quality, performance, firm value, or market reaction; depletion/impairment; and directions for simplified reporting.

3. Results and Discussion

Characteristics of Included Studies

The included studies cover the early discourse on IAS 41 and fair value in agricultural accounting as well as the post-implementation period of PSAK 69. The earliest studies include conceptual criticism of monetary-based valuation in the Indonesian farmer context (Mulawarman, 2014) and evidence of gaps in village-level agricultural accounting practices when ED PSAK 69 began to be discussed (Korompis, 2016). Later studies documented the transition of listed plantation companies toward PSAK 69 before and after its effective implementation (Meilansari et al., 2019; Pratiwi et al., 2018).

After PSAK 69 became effective, the literature increasingly focused on implementation, compliance, disclosure, and market implications. Recent studies examine biological asset disclosure in Indonesian agricultural companies (Owen & Radianto, 2024), market reactions to IAS 41 compliance (Wahyuni et al., 2024), and the relationship between fair value measurement/disclosure and firm value (Alfarisyi et al., 2022). The included studies consist of journal articles and scientific proceedings, with proceedings complementing empirical evidence on specific entities and field-level implementation (Anggraini & Hastuti, 2020; Hudzafidah et al., 2021; Khodijah & Utami, 2020; Octaviani & Lastanti, 2023).

Methodologically, the studies show two dominant tendencies. First, qualitative case studies evaluate the conformity of recognition, measurement, and disclosure of biological assets with PSAK 69 in specific entities such as state-owned plantations, listed plantation companies, and regional plantation enterprises (Batubara, 2019; Puspitasari et al., 2023; Rachmawati et al., 2019; Rafiah et al., 2022). Second, quantitative archival studies generally test determinants of biological asset disclosure and its consequences for market or firm outcomes among agricultural companies listed on the Indonesia Stock Exchange (Alfiani & Rahmawati, 2019; Azzahra et al., 2020; Nur'aini et al., 2022; Rahmawati & Apandi, 2023). Further evidence reinforces the diversity of disclosure determinants and compliance patterns across sectors and periods (Abdullah et al., 2024; Nikmah et al., 2022; Nugroho & Sunaryo, 2025; Putri et al., 2023; Scarvino et al., 2021; Setiawan et al., 2024; Suci et al., 2022; Zufriya et al., 2020).

Fair Value Constraints in Agricultural Accounting Practices

A dominant theme across the included studies is the gap between PSAK 69's fair value measurement requirement and field conditions that often do not provide the technical prerequisites for reliable fair value estimation (IAI, 2015; IAI, n.d.). These constraints appear in large plantation entities as well as in small-scale contexts, where market-based valuation is even more difficult to implement (Korompis, 2016; Mulawarman, 2014). Inactive markets and limited market evidence often constrain fair value measurement, particularly for biological assets in immature stages or assets with highly variable location and quality characteristics (Hidayat, 2018; Puspitasari et al., 2023). As a result, some entities continue to rely on historical cost because it is more verifiable, even though it is not fully aligned with PSAK 69's fair value orientation (Batubara, 2019; Puspitasari et al., 2023). In smallholder plantations, this problem is amplified by informal and fragmented marketing chains, making auditable price evidence difficult to obtain (Korompis, 2016; Mulawarman, 2014).

Price volatility also weakens the stability of fair value estimates, particularly when output or agricultural product prices become a key input in valuation (Alfarisyi et al., 2022; Wahyuni et al., 2024). Evidence from listed companies shows that changes in fair value may affect profit figures and investor perceptions, although market responses are not always significant in the early implementation period (Rahmawati & Apandi, 2023; Wahyuni et al., 2024). This reinforces the need for transparent disclosure of assumptions and price references (IAI, 2015; Owen & Radianto, 2024). When active markets are unavailable, proxy prices such as internal reference prices, offtaker prices, or local market references may serve as practical approximations of fair value (Anggraini & Hastuti, 2020; Hidayat, 2018). However, proxies that are not standardized can reduce comparability and create significant variation in reported values (Batubara, 2019; Puspitasari et al., 2023). High appraisal costs and technical complexity further encourage the use of simpler approaches or delayed revaluation, particularly when independent valuation, discounting models, or detailed biological estimates are required (Fauziah et al., 2022; Puspitasari et al., 2023). Similar constraints are also discussed in livestock and sugarcane case studies (Mutmainnah et al., 2025; Putra et al., 2025).

Biological Data Availability as a Measurement Prerequisite

The synthesis indicates that fair value constraints are not only market-related but also strongly linked to the availability of biological data required for reliable and verifiable estimates (Hidayat, 2018; IAI, 2015). Because biological assets undergo biological transformation, their economic value is dynamic and requires more intensive data than non-biological assets (IAI, 2015; Mulawarman, 2014). Information on biological stage, such as immature and mature plants, is important because it determines future economic benefits, risk, and valuation basis (Batubara, 2019; Purwanti & Wahyuni, 2024). In smallholder plantations, the absence of systematic records on planting year, age, and productive phase makes fair value estimation difficult to perform consistently and auditably (Korompis, 2016; Mulawarman, 2014).

Historical yield and productivity data are also essential for valuing biological assets. When yield data are incomplete, fair value estimates tend to depend on generic assumptions or proxies, increasing bias and reducing measurement reliability (Hidayat, 2018; Puspitasari et al., 2023). In addition, variations in quantitative disclosure among companies suggest that information on asset quantity, asset groups, and related risks remains uneven (Nur'aini et al.,

2022; Owen & Radianto, 2024). Land area and biological units, such as blocks, stands, or tree numbers, are also necessary for biological asset reconciliation. Case studies show that reporting quality improves when entities maintain biological asset registers containing area, asset categories, and periodic asset movements (Anggraini & Hastuti, 2020; Puspitasari et al., 2023). For smallholders, fragmented land and diverse planting patterns make unit standardization difficult, making minimum recording a realistic starting point (Korompis, 2016; Mulawarman, 2014). Cost records remain important when fair value is unavailable or unreliable, as they provide verifiable information for internal reporting and reasonableness checks (Batubara, 2019; IAI, 2015).

Recording Capacity and Accounting Literacy in Smallholder Plantations

The synthesis shows that PSAK 69 implementation is influenced not only by market and biological data constraints but also by recording capacity and accounting literacy. In smallholder plantations, weak recording capacity disrupts the chain from biological activities to accounting information that can be recognized, measured, and disclosed (IAI, 2015; Korompis, 2016). Even in more established entities, variations in disclosure quality indicate that accounting competence and recording systems remain important prerequisites for reliable reporting (Nur'aini et al., 2022; Owen & Radianto, 2024).

Recording biological assets requires capabilities beyond simple cash bookkeeping because it connects biological information such as plant phase, productivity, and quantity changes with accounting treatment (Hidayat, 2018; IAI, 2015). In smallholder contexts, administration is often handled informally by owners or managers, resulting in inconsistent and non-standardized records (Korompis, 2016; Mulawarman, 2014). Similar evidence from livestock and micro-enterprise contexts suggests that biological events such as mortality or declining productivity are not always reflected in reports, creating gaps between book values and actual conditions (Anggraini, 2022; Ardiana & Agustina, 2021).

Recording tools range from manual notes and spreadsheets to integrated systems in larger entities. For smallholders, manual and non-standardized recording makes data vulnerable to loss and difficult to reconcile, thereby limiting consistent disclosure (Korompis, 2016; Mulawarman, 2014). Field studies also show that disclosure is often the weakest element when transactions and biological activities are not systematically documented (Anggraini, 2022; Maulida et al., 2024).

Institutional and Ecosystem Support

The findings further show that successful PSAK 69 implementation, particularly under fair value constraints, depends not only on technical aspects but also on institutional and ecosystem support. In many cases, limitations at the individual level can be mitigated by institutions such as cooperatives, farmer groups, offtakers, field assistants, and government programs that provide data, practice standards, and access to resources (IAI, 2015).

Cooperatives and offtakers are important actors in bridging field practices and formal reporting requirements. They can consolidate production, price, and transaction data, thereby creating more stable information for reporting purposes

(Korompis, 2016). Offtakers that purchase crops regularly can also provide consistent price references, which may serve as a starting point for fair value proxies or transparent disclosure. At a broader level, cooperatives can function as collective accounting units, centralizing transaction and biological activity records that individual smallholders may not be able to maintain (Korompis, 2016; Mulawarman, 2014).

Capacity building through technical assistance, accounting training, and simplified record-keeping guidance is also crucial. Such assistance should not only introduce standards but also help actors record transactions, prepare biological asset registers, and document biological changes in a simple manner. Access to finance also creates incentives for better reporting because formal financial institutions often require more reliable financial information (Alfarisyi et al., 2022). Government and professional institutions can support this ecosystem by issuing simplified technical reporting guidelines, facilitating commodity price data, and integrating agricultural extension programs with financial recording training.

Simplified Reporting Design: The Bridging Model

Based on the thematic synthesis, the gap between PSAK 69 and field-level accounting practices cannot be addressed solely by technical adjustments to fair value measurement. Instead, a simplified, staged, and contextual reporting approach is needed as a bridging model between normative standards and implementation capacity. This model is built on the main constraints identified in the review: fair value limitations, biological data constraints, recording capacity, and institutional support (IAI, 2015; Korompis, 2016).

At the initial stage, feasible reporting does not need to immediately comply with all the complexities of PSAK 69. It can begin with minimum reporting components: (1) cash and main transaction records, (2) production and sales records, (3) a simple biological asset register, (4) records of major costs such as inputs, labor, and maintenance, and (5) simple disclosure of assumptions, especially price sources and estimation methods (IAI, 2015; Korompis, 2016; Mulawarman, 2014; Owen & Radianto, 2024).

The synthesis supports a tiered reporting model. Tier 1, basic recording, focuses on cash, production, and cost records without fair value measurement. Tier 2, enhanced recording, adds a biological asset register, phase classification, proxy pricing, and assumption disclosure. Tier 3, standard-oriented reporting, applies more complete PSAK 69-aligned fair value measurement, biological asset reconciliation, and comprehensive disclosure. This staged approach allows smallholders and related entities to move gradually from informal recording to more standardized reporting without being forced to immediately meet the full complexity of PSAK 69.

4. Conceptual Synthesis

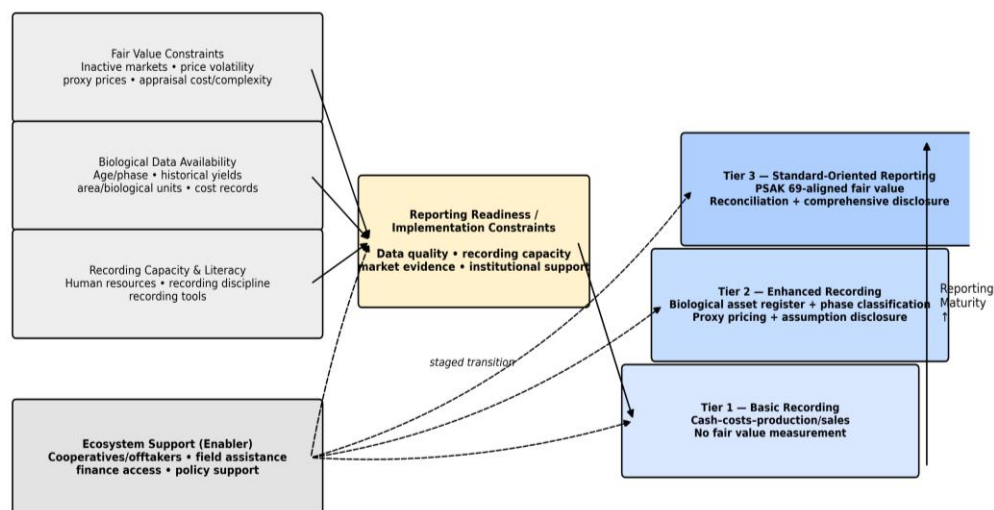
Conceptually, the simplified reporting design emerges as a response to the constraints of PSAK 69 implementation in Indonesian smallholder plantation accounting. The model identifies four key factors that jointly shape the need for a contextual reporting approach: fair value constraints, biological data availability, recording capacity and accounting literacy, and institutional ecosystem support. Fair

value constraints arise from inactive markets, price volatility, and appraisal costs, while limited biological data such as age, productivity, area, and costs restrict reliable estimation. These constraints are reinforced by weak recording capacity and limited accounting literacy, as well as insufficient ecosystem support in the form of cooperative/offtaker roles, assistance, data access, and financing.

The conceptual framework shifts the implementation perspective from a purely compliance-driven approach to a capacity-driven approach. PSAK 69 implementation is not treated as a normative obligation that must be fulfilled at once, but as a staged process shaped by data readiness and the ability of actors to manage accounting information. In this framework, data and recording systems become the main prerequisites for successful fair value implementation. Without adequate biological and cost data, fair value cannot be applied reliably and consistently; therefore, improving reporting quality should begin with strengthening recording and data management.

Practically, the model highlights the importance of institutional ecosystems as enablers that allow small-scale actors to access data sources, practice standards, and technical support. The main practical contribution is a tiered reporting model that provides a realistic transition pathway from informal recording to reporting that is increasingly aligned with PSAK 69 according to each entity's readiness. Thus, the bridging model not only explains the sources of implementation problems but also offers an implementable reporting framework that can be applied contextually across different levels of business capacity.

Figure 2. Tiered reporting pathway for PSAK 69 implementation in smallholder plantation accounting



5. Conclusion

This study concludes that a significant gap exists between the requirements of PSAK 69 and field-level accounting practices, particularly in Indonesian smallholder plantations. This gap is primarily driven by constraints in fair value measurement, including inactive markets, high price volatility, and appraisal costs and complexity.

However, these problems are closely related to biological data limitations, recording capacity, and institutional ecosystem support.

The findings emphasize that data availability and recording systems are the foundation for PSAK 69 implementation. Without adequate data on plant age, productivity, area, and costs, fair value measurement cannot be conducted reliably. These limitations are further reinforced by low accounting literacy and informal recording practices among small-scale actors, which reduce reporting quality.

In response, this study proposes a simplified reporting design as a bridge between standards and practice. The model emphasizes a staged approach that enables actors to develop record-keeping progressively, from basic recording to more PSAK 69-aligned reporting. Overall, the study contributes a conceptual framework that explains implementation problems and offers a contextual and implementable solution for more inclusive reporting practices in smallholder plantations.

6. Policy Implications

This study offers several policy implications for stakeholders involved in PSAK 69 implementation in Indonesia. For regulators, standard setters, and MSME development agencies, the findings indicate the need for simplified and contextual technical reporting guidelines for small-scale entities such as smallholder plantations. Full compliance approaches should be complemented by staged implementation guidance that considers data limitations, recording capacity, and market conditions.

For cooperatives, offtakers, and field assistants, the study highlights the importance of acting as data aggregators, recording system facilitators, and providers of price and transaction information. These institutions can improve data and reporting quality at the actor level without relying solely on individual capacity.

The study also recommends adopting a tiered reporting model that begins with basic recording and gradually moves toward PSAK 69-aligned reporting. In addition, strengthening the data and price information ecosystem is necessary, including the development of systematic price references and accountable fair value proxies. Collaboration among government, financial institutions, cooperatives, and industry actors is essential to provide transparent, standardized, and accessible data for better reporting and decision-making in the agricultural sector.

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