



Regulatory Gaps Facing Indonesian Village-Owned Enterprises in Cross-Border Digital Trade and Insights from Malaysia

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Abstract

Background: Government Regulation No. 11 of 2021 grants Village-Owned Enterprises (BUMDes) legal entity status without any territorial limit on their markets. Yet official data record only 22 exporting BUMDes out of about 66,000, and none is identified as trading through cross-border e-commerce platforms, revealing a gap between formal legal capacity and actual participation.

Objective: This study examines the legal capacity of BUMDes to engage in cross-border digital trade under Indonesian law currently in force, identifies regulatory and institutional barriers, and proposes an institutional model informed by a comparison with Malaysia.

Methods: This normative (doctrinal) socio-legal study combines statutory, conceptual, and comparative approaches based solely on documentary sources. Provisions of the village, electronic commerce (PMSE), and export regimes were analyzed through systematic and teleological interpretation and gap analysis, and Malaysian arrangements were compared functionally along seven dimensions.

Results: BUMDes hold formal legal capacity to export, but the village, PMSE, and export regimes follow the conflicting logics of local empowerment, domestic market protection, and facilitation for established exporters, producing institutional stagnation. Malaysia's Digital Free Trade Zone (DFTZ) and rural digital programs illustrate a facilitation-first pathway, whereas Indonesia follows an institution-first pathway that grants legal status without trade facilitation.

Conclusion: Malaysia offers functional insights rather than a transferable template, because the DFTZ has its own documented limitations. The proposed BUMDes Export Aggregation Model, which uses BUMDes Bersama as export aggregators within a joint regulatory sandbox, is a normative proposal that requires empirical validation.

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INTRODUCTION

Indonesia's e-commerce sector has expanded rapidly: official survey data show that the number of businesses selling online rose from 2.36 million in 2020 to 4.40 million in 2024, while more than 99 percent of e-commerce transactions were still delivered to domestic destinations (Statistics Indonesia, 2025). However, this expansion is uneven both geographically and institutionally. Urban micro, small, and medium enterprises (MSMEs) are gradually integrating into domestic and international digital markets, while rural economic institutions remain on the

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fringes of this transformation ([Dhewanto et al., 2020](#)). Among these institutions, Village-Owned Enterprises (hereinafter BUMDes) hold a unique position. It is a community-based commercial organization established under the mission of Law No. 6 on Villages of 2014, which aims to revitalize the economic power of the region and strengthen the financial autonomy of the village ([Rahayu et al., 2024](#)). As of 18 April 2026, the Ministry of Villages' information system recorded 73,205 registered entities, comprising 66,730 BUMDes and 6,475 inter-village enterprises (BUMDes Bersama); this figure counts registered entities rather than those holding legal entity status, representing a scale of rural economic institutionalization rarely seen in developing countries ([Ministry of Villages and Development of Disadvantaged Regions, 2026](#)).

The legal framework that governs BUMDes has undergone a fundamental transformation through the enactment of Law No. 11 of 2020 on Job Creation (now replaced by Law No. 6 of 2023) and its implementing regulations, Government Regulation No. 11 of 2021. Prior to this reform, BUMDes operated in legally ambiguous circumstances. This means that, despite being recognized as business entities, they are denied the full legal personality granted to limited liability companies, cooperatives, and state-owned enterprises, limiting their ability to conclude contracts, obtain commercial credit, and form partnerships with third parties ([Pakpahan et al., 2025](#)). Under Article 8(1) of Government Regulation No. 11 of 2021, a BUMDes or BUMDes Bersama acquires legal entity status when the Minister of Law issues an electronic registration certificate, following registration through the Village Information System (Article 9). This status confers legal personality, meaning that the BUMDes can hold rights and obligations and act in law in its own name, including by cooperating and contracting with other parties (Articles 54 and 55). Legal personality must nevertheless be distinguished from three related notions: legal capacity, which is the scope of acts the entity may lawfully perform; business licensing, which is obtained separately through the Online Single Submission (OSS) system and its Business Identification Number (NIB); and actual capacity to export, which depends on further trade, customs, and market requirements. Some limitations also remain, for example on the sources from which a BUMDes may borrow (Article 48(2)), as discussed under RQ1. In principle, these reforms remove the doctrinal barriers that previously excluded BUMDes from all commercial activities available to companies, especially participation in export trade and cross-border e-commerce.

However, this practice deviates greatly from doctrine. First, the implementation of the legal entity regime is incomplete, with only 18,850 of 65,941 BUMDes holding legal entity status in June 2024 and 33,588 by 4 September 2025, legal entity status meaning receipt of the electronic registration certificate issued by the Minister of Law under Article 8(1) of Government Regulation No. 11 of 2021, and persistent administrative, human, and institutional constraints at the village level ([ANTARA, 2024, 2025](#)). Second, and more fundamental to this study, even BUMDes that hold legal entity status rarely export, and no official data record their participation in cross-border digital trade. National statistics do not disaggregate exports by village enterprise or by sales channel; the most recent ministerial disclosure identifies only 22 exporting BUMDes, with a combined export value of IDR 183.5 billion in commodities such as coffee, coconut, white pepper, and seaweed, and does not indicate that any of these exports used cross-border e-commerce platforms ([Agusta, 2024](#)). By June 2024, only 1,016 BUMDes and BUMDes Bersama had obtained an NIB, the basic identifier required of every exporter ([ANTARA, 2024](#)). There is no systematic policy framework linking BUMDes, as legally competent exporters, with the cross-border e-commerce ecosystem, and Indonesia's regulatory framework for e-commerce is developing almost in the opposite direction of promoting rural exports. The foundation of Indonesia's current e-commerce regime (PMSE), Regulation of the Minister of Trade No. 31 of 2023, is oriented mainly toward regulating inbound transactions. Textually, it prohibits social commerce platforms from facilitating payment transactions (Article 21(3)) and sets a minimum price of USD 100 FOB per unit for finished goods sold directly from abroad through cross-border platforms (Article 19(2)). Characterizing this orientation as protective is the authors' interpretation of these provisions, consistent with the stated policy aim of creating a fair e-commerce environment for MSMEs Hasran et al. ([2024](#)) and with legal commentary on the regulation ([Rena et al., 2023](#)). As a result, significant regulatory asymmetry has emerged. While Indonesian law establishes a detailed set of controls on inbound cross-border e-commerce, Indonesian law does not provide an appropriate

framework for outbound participation by the rural enterprises that the state itself has institutionalized over the past decade.

To the authors' knowledge, this asymmetry has not been examined in the existing literature, a claim based on the literature search described in the Method section. Research on BUMDes focuses heavily on internal governance, financial accountability, social capital, and regional empowerment results Yuliani (2024), while a growing but still limited body of work investigates digital transformation in marketing and financial management (Anisariza et al., 2025; Najmudin et al., 2024). Meanwhile, the literature on Indonesia's PMSE system focuses on platform regulation, consumer protection, and import restrictions, treating rural companies as protected entities rather than potential participants in cross-border trade. What is already known, therefore, is that BUMDes face persistent governance and capacity constraints Yuliani (2024), that their digitalization has so far targeted domestic markets Fitri et al. (2025), and that Indonesia's e-commerce regulation is designed chiefly to manage inbound competition (Rena et al., 2023). What remains unknown is whether the legal entity status granted since 2021 translates into a usable legal pathway to export through digital channels, and which rules or institutional gaps prevent it. This study addresses that gap, and its novelty lies in combining three elements that previous studies have treated separately: it treats BUMDes as potential subjects of trade law rather than only as instruments of village governance; it maps, provision by provision, how the village, PMSE, and export regimes apply simultaneously to a single legal entity; and it derives from a structured comparison with Malaysia an institutional model that can be implemented largely through existing legal instruments.

Accordingly, the study pursues three objectives, each framed as a research question (RQ). RQ1: To what extent does Indonesian law currently in force give BUMDes the legal capacity to engage in cross-border digital trade? RQ2: Which regulatory and institutional barriers arise from the interaction of the village, PMSE, and export regimes? RQ3: Which institutional model, informed by Malaysia's experience, could enable BUMDes to participate in cross-border digital trade? The same three terms, namely legal capacity, regulatory friction, and institutional model, are used consistently for the objectives, for the findings (organized as RQ1 to RQ3 in the Results and Discussion), and for the Conclusion.

In answering the third question, this research is mainly based on Malaysia's experience. The Malaysia Digital Free Trade Zone (DFTZ), launched in 2017 in partnership with Alibaba Group, is the clearest attempt to institutionalize SME participation in cross-border e-commerce in Southeast Asia through state-led logistics, customs, and platform infrastructure (Tham, 2018). This is complemented by rural digital economy programs such as eUsahawan and the Digital Economy Center (PEDi) network MCMC (2022), Malaysia's experience embodies what this study calls a "Facilitation First" approach. In other words, onboarding trading infrastructure and platforms precede and replace formal institutional designs. Instead, Indonesia pursues an institutional-first approach, granting legal status to rural companies without a corresponding trade facilitation framework. There is no such thing as a problem-free approach, and a study in Malaysia noted that about 40 percent of the 15 SMEs interviewed were pessimistic about the DFTZ (Chin et al., 2023). It is precisely this difference in sequencing, together with the incomplete results of both approaches, that makes the comparison analytically productive rather than a search for a model to copy.

This research contributes to the literature in three main areas. Conceptually, BUMDes will be reconstructed from being subject to village governance to potential subjects of international trade law, opening up research topics at the intersection of village law and digital trade regulation. Doctrinally, for the first time, it systematically maps the regulatory friction between the Indonesian village legal system, the PMSE system, and the export promotion framework when applying it to a single legal entity. Normatively, a "BUMDes Export Aggregation Model" is proposed that uses the existing legal form of BUMDes Bersama as export aggregators, supported by a regulatory sandbox jointly managed by the Ministry of Trade and the Ministry of Villages.

Research on village-owned enterprises has developed in three successive waves reflecting the evolution of the institution's own law. The first wave, after the enactment of Law No. 6 of Villages of 2014, mainly focused on the descriptive direction and development, considering

BUMDes as a means of village empowerment and as a contributor to the village's original income (Dewi, 2014). Research in this wave has consistently identified common constraints such as limited management capacity, lack of community participation, and dependence on village funds, but the legal form of BUMDes is treated not as an analytical variable but as a problematic background.

The second wave emerged in response to the increasing legal ambiguity faced by practitioners. Based on the original Village Law, BUMDes are recognized as business entities without full legal personality, holding a lower status than limited liability companies, cooperatives, and regional capital entities. This ambiguity has led to certain transactional issues, such as uncertainty in partnerships with third parties, limited access to commercial credit, and unclear allocation of responsibilities. The enactment of Law No. 11 on Job Creation in 2020 was implemented by Government Regulation No. 11 of 2021, which resolved this doctrinal problem by granting full legal personality to registered BUMDes through the Ministry of Villages' electronic system and issuing certification from the Ministry of Law and Human Rights. Post-reform academic research notes the promise of this transformation and the lack of implementation. Studies of individual BUMDes have reported that non-compliance with the new registration system results in companies lacking formal legal protections, and research conducted has found that the certification process is hampered by communication failures, staffing limitations, and bureaucratic complexity at the village level (Pakpahan et al., 2025).

The third and latest wave is to examine the digitalization of BUMDes. This literature documents the adoption of digital marketing, market information systems, and financial management applications by village businesses Najmudin et al. (2024), and analyze the institutional conditions for successful implementation, social capital, government support, and digital literacy (Rahayu et al., 2024; Yuliatiningtyas et al., 2024).

These two characteristics of waves are important in this study. First, the geographical framework is almost entirely limited to the domestic market, and digitalization is studied as a means of reaching local and domestic markets rather than international ones. Second, legal involvement is weak. The third wave proceeded as if full legal personality, the central achievement of the second wave, and the formal capacity that accompanied it as an exporter, did not affect the size of the market that BUMDes could legally handle. Therefore, while the literature has reached the threshold of the question posed by this study, without crossing that question, if BUMDes currently hold the legal capacity of any Indonesian company, what will prevent them from participating in cross-border digital trade, the most dynamic segment of modern trade?

Regulations on e-commerce in Indonesia are based on Law No. 11 of 2008 on Electronic Information and Transactions, as amended, Government Regulation No. 80 of 2019 on Trade through Electronic Systems, and as the current operational basis, Regulation of the Minister of Trade No. 31 of 2023. The trajectory of this framework has been shaped decisively by concerns over incoming competition. Regulation 31/2023 was established amid a public controversy over predatory pricing on social trading platforms, and it replaced Regulation 50/2020 when it came into force in September 2023. This regulation sets a minimum price of USD 100 FOB per unit (Article 19(2)) for foreign products sold directly to Indonesia through cross-border platforms. It also prohibits social commerce platforms from facilitating payment transactions (Article 21(3)) and introduces mandatory Indonesian product information for foreign merchants, a positive list of direct import permits, and an expansion of registration requirements for offshore platform operators (Herbert Smith Freehills, 2023).

The study uses an institutional theoretical framework derived from North (1990), which distinguishes institutions as "rules of the game" from organizations as players, and is expanded by the socio-legal insight that formal legal capacity is a necessary but inadequate condition for economic action. There are three propositions in the structure of the analysis.

First, formal rules require complementary enforcement and facilitation structures in order to function effectively. The granting of legal status to BUMDes is a formal change in the rules, and whether it leads to the expansion of economic action depends on complementary institutions, customs access, platform orientation, logistics, and funding, and does not create a formal status alone. The gap between legal capacity and de facto capacity is a central institutional phenomenon

that is being studied.

Second, regulatory frameworks that address different policy challenges can create friction when applied to a single entity. The village legal system embodies the logic of granting local authority. The PMSE system encodes the logic of protecting the domestic market. The export system includes trade facilitation logic for existing commercial entities. BUMDes, which aim to export through digital platforms, are at the crossroads of these three areas, and its analysis examines how their discordant logic creates an institutional deadlock.

Third, the order of institutional and infrastructure development is important. Comparative experience shows two typical paths to integrating rural companies into digital commerce. The facilitation pathway that prioritizes is symbolized by the Malaysian Digital Free Trade Zone and its supporting programs Tham & Kam (2019), and in a more organic form, China's Taobao Village Li (2017), Lin et al. (2016) and Luo & Niu (2019) are building a trading infrastructure and access platform either before or in lieu of formal institutional design. Indonesia's path of prioritizing institutions will formalize the legal status of rural companies while delaying the smoothing process. There is no clear path that is superior. A qualitative study found that some Malaysian SMEs were pessimistic about the DFTZ Chin et al. (2023), while the success of Taobao Village is supported by a self-organizing ecosystem formed with little national institutional design (Leong et al., 2016). However, reproduction in rural areas has proven difficult (Lin, 2019; Phelps et al., 2022; Zhou et al., 2021). Therefore, this framework does not only predict that Indonesia should adopt the Malaysian model. Institutional priority investments in Indonesia remain economically dormant until a facilitation structure is established, with attention focused on which structures are supplied by whom and under which regulatory authorities are provided. This issue is discussed under RQ3.

METHOD

This study is normative (doctrinal) socio-legal research that combines three approaches: a statutory approach, a conceptual approach, and a comparative approach. It relies exclusively on documentary materials. No interviews, surveys, observations, or other primary empirical data were collected; the socio-legal dimension lies in reading legal provisions against official statistics and policy documents that show how the law operates in practice, not in fieldwork. The term "empirical" is therefore no longer used to describe the design.

Materials were selected according to explicit criteria. Legal materials comprise the statutes and regulations in force on 30 June 2026 that govern (i) the establishment, legal status, and business activities of BUMDes, (ii) trade through electronic systems, and (iii) business licensing, export, and customs registration, retrieved from official legal databases. Official statistics were taken from the Ministry of Villages' information system, Statistics Indonesia, and ministerial disclosures, and the date of each figure is reported in the text. The academic literature was identified through a structured search of Scopus, Google Scholar, and the Garuda portal covering 2014 to 2026, combining the terms "BUMDes" or "village-owned enterprise" with "digital", "e-commerce", "export", "legal entity", or "PMSE", and the terms "Digital Free Trade Zone" or "DFTZ" with "SME". Studies were included if they addressed the legal status, governance, digitalization, or market orientation of BUMDes, the regulation of Indonesian e-commerce, or the Malaysian DFTZ and rural digital programmes; studies without an identifiable method or unrelated to these themes were excluded. The studies retained and cited fall into four streams: BUMDes governance and digitalization (16 studies), Indonesian e-commerce and MSME digitalization (7 studies), the Malaysian DFTZ and SME support (9 studies and 3 policy reports), and Chinese Taobao villages as regional context (6 studies and 1 working paper). None of the retained studies analyzes the legal capacity of BUMDes to export through digital channels, which supports the gap identified in the Introduction. Table 1 summarizes the materials by type and evidentiary status.

Table 1

Research materials by type and evidentiary role

Type of material	Materials used in this study	Evidentiary role in the analysis
Primary legal materials (Indonesia)	Law No. 6 of 2014 on Villages as amended (most recently by Law No. 3 of 2024); Law No. 11 of 2020 as replaced by Law No. 6 of 2023; Law No. 11 of 2008 as amended; GR No. 11 of 2021; GR No. 80 of 2019; GR No. 5 of 2021; MoT Reg. No. 31 of 2023 and No. 23 of 2023; MoV Reg. No. 3 of 2021; MoLHR Reg. No. 40 of 2021	Binding sources; establish the norms that are interpreted
Primary legal materials (Malaysia)	Free Zones Act 1990 (Act 438); Free Zones Regulations 1991	Establish the legal basis of the DFTZ
Official statistics and government documents	(BPS, 2025; Kemendes, 2026; MCMC, 2022)	Establish facts about implementation and scale
Academic literature	38 studies in four thematic streams (see text) and 2 theoretical works (North, 1990; Zetzsche et al., 2017)	Support interpretation and comparison
Policy reports and working papers	(Hasran et al., 2024; Kuriakose & Tiew, 2022; Luo & Niu, 2019; Tham, 2018; Tham & Kam, 2019)	Contextual evidence; not treated as binding or conclusive
Practitioner commentary and news reports	(Agusta, 2024; ANTARA, 2024, 2025; Herbert Smith Freehills, 2023)	Context only; news items are used solely as secondary reports of official data and are identified as such

Note: GR = Government Regulation; MoT Reg. = Regulation of the Minister of Trade; MoV Reg. = Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration; MoLHR Reg. = Regulation of the Minister of Law and Human Rights. Source: compiled by the authors.

This legal approach examines the vertical and horizontal alignment of the positive legal framework (the law currently in force) that governs the participation of BUMDes in cross-border digital trade. The main legal materials are as follows: (i) the village regime: Law No. 6 of 2014 on Villages, as amended by Article 117 of Law No. 11 of 2020 on Job Creation (subsequently replaced by Law No. 6 of 2023, which enacted Government Regulation in Lieu of Law No. 2 of 2022 on Job Creation) and last amended by Law No. 3 of 2024; Government Regulation No. 11 of 2021 on Village-Owned Enterprises; Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration No. 3 of 2021 on the registration, data collection and ranking, guidance and development, and procurement of goods and services of BUMDes; and Regulation of the Minister of Law and Human Rights No. 40 of 2021 on the issuance of legal entity registration certificates for BUMDes; (ii) the e-commerce regime: Law No. 11 of 2008 on Electronic Information and Transactions, as last amended by Law No. 1 of 2024, Government Regulation Number 80 of 2019 (concerning trade through electronic systems), and Regulation of the Minister of Trade Number 31 of 2023; and (iii) the licensing and export regime: Government Regulation No. 5 of 2021 on Risk Based Business Licensing, in particular Article 176(5) on the functions of the NIB, and Regulation of the Minister of Trade No. 23 of 2023 on Export Policy and Regulation. These materials were analyzed to determine whether rights, obligations, and procedural paths have been established for BUMDes that act as exporters through digital platforms. Three legal questions guided this approach: which provisions confer legal personality and business capacity on BUMDes; whether any provision limits the territorial or market scope of their business; and which licensing, customs, and export requirements apply to a BUMDes acting as an exporter.

This conceptual approach reconsiders the legal concepts underlying the analysis, namely legal personality and legal capacity applied to hybrid public bodies, the concept of exporter in Indonesian trade law, and the concept of cross-border PMSE regulation. This approach is necessary because a BUMDes is a distinctive legal form established by the village government and

operated commercially, and does not always fall into the category of being classified as a traditional business entity. Operationally, each concept was defined from statutory text and doctrine and then used as an analytical category to classify the provisions examined, distinguishing legal personality (the status of a legal subject), legal capacity (the scope of acts the entity may lawfully perform), business licensing (the NIB and sectoral permits), and actual export capacity (the practical ability to meet customs, product, and logistics requirements).

The comparative approach mainly focuses on the Digital Free Trade Zone framework and the Rural Digital Economy Programme (eUsahawan and Pusat Ekonomi Digital, PEDi). Malaysia was chosen because of its regional proximity, similar micro-enterprise structure, access to the same ASEAN Digital Economy Framework, and a facilitation-prioritizing approach that reverses Indonesia's institutional priorities, allowing for structured comparisons rather than decentralized multinational surveys. Malaysia also hosted the first electronic world trade platform hub outside China, making its arrangement one of the most developed state and platform partnerships for SME cross-border e-commerce in the region (Chin et al., 2023). The unit of comparison is the institutional arrangement through which each state enables small producers to sell across borders through digital channels, not individual statutes or business forms. Following a functional method, the two systems were compared along seven dimensions: (1) legal status of the participating entity, (2) export licensing, (3) customs facilitation, (4) logistics and fulfilment, (5) platform onboarding, (6) digital infrastructure and capability building, and (7) institutional coordination (Table 4). Considering the significant differences in the platform ecosystem and country-market relations, the Taobao Village Literature in China is used not as a primary comparison but as an additional regional context.

The analysis proceeded in four steps, summarized in Table 2. First, the provisions of each regime relevant to the three legal questions were inventoried. Second, systematic interpretation tested whether provisions within and across regimes are consistent, for example whether the market scope implied by Articles 3 and 7(4) of Government Regulation No. 11 of 2021 is restricted by any trade or export rule. Third, teleological interpretation identified the policy objective pursued by each regime. Fourth, gap analysis identified the norms that a coherent outbound pathway would require but that are absent. The results of the fourth step were then compared with the Malaysian arrangement along the seven dimensions in order to identify functional equivalents, and each step was linked to the research question it answers.

Table 2

Analytical matrix linking provisions, legal issues, interpretation, comparison, and findings

Provisions examined	Legal issue	Technique	Comparison with Malaysia	Resulting finding (RQ)
GR 11/2021 Art. 1 point 1, 8(1), 9	Does a BUMDes have legal personality?	Systematic	SMEs use ordinary company forms; no village enterprise equivalent	Legal personality arises upon issuance of the registration certificate (RQ1)
GR 11/2021 Art. 3, 5, 6, 7(3) and (4), 50	Is the market scope territorially limited?	Systematic; teleological	DFTZ open to any registered SME	No territorial or market limit; functions include consolidation and marketing (RQ1)
GR 11/2021 Art. 48(2), 54, 55	Are financing sources and contracting partners limited?	Systematic	No comparable restriction on SMEs	Loans limited to domestic sources; listed partners are domestic (RQ1)
GR 5/2021 Art. 176(5); MoT Reg. 23/2023 Art. 2 and 4	Can a BUMDes meet exporter requirements?	Systematic	Single eServices platform and hub-based customs clearance	NIB and taxpayer number suffice for unrestricted goods (RQ1)

Provisions examined	Legal issue	Technique	Comparison with Malaysia	Resulting finding (RQ)
MoT Reg. 31/2023 Art. 19(2), 21(3)	Does the PMSE regime address outbound sales?	Teleological analysis	DFTZ designed around outbound facilitation	Inbound orientation; no outbound procedure (RQ2)
MoV Reg. 3/2021; GR 11/2021 Art. 71 and 72	Do guidance and ranking instruments cover export readiness?	Teleological ; gap analysis	eUsahawan and PEDi capability programmes	No export readiness provision identified (RQ2)
All three regimes jointly	Which authority is responsible for outbound rural e-commerce?	Gap analysis	Coordination among MITI, MDEC, Customs, and the platform partner	No mandated authority, producing institutional stagnation (RQ2 and RQ3)

Note: abbreviations as in Table 1. Source: compiled by the authors.

RESULTS AND DISCUSSION

Results

Legal Capacity of BUMDes as Cross-Border Commercial Actors (RQ1)

The first research challenge is whether Indonesia's positive law provides BUMDes with the legal capacity to engage in cross-border digital trade. Interpreting the framework systematically since 2021, the answer is doctrinally affirmative. This affirmative answer is itself the first substantive finding, because it rules out the most intuitive explanation for the absence of BUMDes from cross-border trade, namely a lack of legal capacity. Table 3 traces this conclusion provision by provision, from the norm to its interpretation and to its implication for BUMDes.

According to Government Regulation No. 11 of 2021, BUMDes obtain legal entity status by registering through the Ministry of Villages' information system and issuing an electronic registration certificate from the Minister of Law (Article 8(1) in conjunction with Article 9). This regulation broadly defines BUMDes (Article 1 point 1) as entities for business management, asset utilization, investment development and productivity, and the provision of services for the welfare of rural communities, and does not include regional restrictions on the markets handled by BUMDes. No provision of the regulation restricts the commercial activities of BUMDes to villages, districts, or national borders; on the contrary, Article 3(e) lists the development of a village digital economy ecosystem among the objectives of BUMDes, Article 5(c) includes the purchase and marketing of village products among their functions, and Article 7(4) provides that the establishment of a BUMDes Bersama is not bound by administrative boundaries. In addition, the regulation allows inter-village enterprises (BUMDes Bersama) that are structurally suitable for activities beyond the size of a single village, established by two or more villages through inter-village consultation and sharing independent legal personality and capital base, a point developed under RQ3.

Downstream commercial architecture reinforces the capacity of this doctrine. Through the collaboration between the Ministry of Villages and the Ministry of Investment/BKPM, BUMDes legal institutions have been integrated into the OSS (Online Single Submission) system and have obtained a Business Identification Number (NIB). In particular, there is no limit on the type or number of KBLI business classifications that can be registered by BUMDes. The legal mechanism connecting these steps must, however, be stated precisely. Under Article 176(5) of Government Regulation No. 5 of 2021, the NIB is the business identity issued through OSS and also functions as the importer identification number (API) and as the customs access right (*hak akses kepabeanan*). The NIB is therefore an instrument of business identification and licensing, not an export permit. Export eligibility is governed separately by Regulation of the Minister of Trade No. 23 of 2023, which requires every exporter to hold an NIB (Article 2(1)), requires additional export licensing for certain listed goods (Article 2(2)), and grants business entities that hold an NIB and a taxpayer number access to the national single window through which export customs declarations are submitted (Article 4(3) and (4)). In legal terms, a BUMDes that holds legal entity status, an NIB with the appropriate business classification (KBLI), and a taxpayer number

therefore meets the same entry requirements as any other Indonesian business entity for exporting goods that are not subject to export restrictions, and it may open accounts, contract with logistics providers, register on platforms, and complete customs procedures in its own name. This equivalence is limited to eligibility: it does not extend to restricted goods, for which export licences are required, and it does not establish the practical capacity to meet destination market standards, logistics, and payment requirements.

Table 3

Provision by provision mapping of the legal capacity of BUMDes to engage in cross-border digital trade

Dimension	Provision	Interpretation	Implication for BUMDes
Legal personality	Law 6/2014 Art. 1 point 6 as amended by Art. 117 of the Job Creation Law; GR 11/2021 Art. 1 point 1, 8(1), 9	A BUMDes or BUMDes Bersama becomes a legal entity when the Minister of Law issues the electronic registration certificate after registration through the Village Information System	Only certified BUMDes can act in law in their own name; 33,588 BUMDes held this status in September 2025
Objectives and functions	GR 11/2021 Art. 3(a) and (e); Art. 5(a) and (c); Art. 6	Objectives include developing the village digital economy ecosystem; functions include consolidating, buying, and marketing village products	Online and export sales fall within the permissible objectives and functions
Territorial scope	GR 11/2021 Art. 7(3) and (4)	BUMDes Bersama may be formed on the basis of shared potential, business activity, or proximity and is not bound by administrative boundaries; no provision limits markets	No legal barrier to serving foreign markets
Business units	GR 11/2021 Art. 8(2), 49, 50(c) and (f)	Business units may have separate legal personality and may run distribution and trade networks or act as intermediaries and agents	A dedicated export unit can be established
Contracting and cooperation	GR 11/2021 Art. 54 and 55	Cooperation with other parties is permitted; the listed partners, a non-exhaustive list, are domestic public bodies and entities owned by Indonesian citizens or legal entities	Domestic platforms, forwarders, and payment providers are clearly covered; foreign counterparties are not excluded but not expressly contemplated
Financing	GR 11/2021 Art. 48(2)	Loans may be taken only from financial institutions, central or regional government, and other domestic sources, subject to two years of sound financial reports	Foreign sourced trade finance is unavailable as a loan; export working capital is constrained
Business identity and licensing	GR 5/2021 Art. 176(5)	The NIB is the business identity and also serves as importer identification and customs access right	OSS registration provides the identifier required of exporters; only 1,016 held an NIB in June 2024

Dimension	Provision	Interpretation	Implication for BUMDes
Export eligibility	MoT Reg. 23/2023 Art. 2(1) and (2); Art. 4(3) and (4)	Exporters must hold an NIB; listed goods require export licensing; business entities access the single window with an NIB and taxpayer number	Eligible to export unrestricted goods; restricted goods need additional licences
Outbound digital channel	MoT Reg. 31/2023 Art. 19(2) and 21(3)	The rules govern inbound cross-border sales and platform conduct; there is no procedure for domestic merchants selling abroad	Outbound online sales rely on general export rules without PMSE specific facilitation

Note: abbreviations as in Table 1. Source: compiled by the authors from the regulations cited and official data (ANTARA, 2024, 2025).

However, this legal capacity is undermined by two inadequate implementations. The first is coverage. Of the 65,941 BUMDes recorded in June 2024, only 18,850 had legal entity status, and only 1,016 BUMDes and BUMDes Bersama had obtained an NIB (ANTARA, 2024). By September 2025 the number with legal entity status had risen to 33,588 ANTARA (2025), still only about half of the 66,730 BUMDes registered in April 2026 (Kemendes, 2026). Therefore, the population of BUMDes, with a complete formal toolkit for exporters, is just the thin upper layer of the institutional pyramid. The second weakness is orientation. The tools acquired by BUMDes are designed and managed for systems built around traditional business entities. Guidelines, procedures, and promotions in the village legal system are not about what BUMDes should do regarding export capacity, and their silence is shown in the following sections.

Regulatory Friction among Three Regimes (RQ2)

The second finding is that the three regulatory frameworks that converge on BUMDes aimed at exports embody a discordant and sometimes contradictory policy logic, resulting in what the study calls "institutional stagnation." In other words, although formally they have the right to act, no system provides these actors with an avenue through which to act.

For analytical precision, this study distinguishes institutional stagnation from a mere regulatory gap. A regulatory gap exists when a single rule is missing and can be closed by adding a provision within one regime. Institutional stagnation, as used here, is a condition in which an actor holds formal legal capacity but cannot convert it into action because several regimes that apply to it simultaneously pursue divergent objectives and none assigns responsibility for the activity concerned. Four indicators are used to identify it: (1) formal capacity exists, meaning that no rule prohibits the activity; (2) each relevant regime is internally coherent, yet their objectives diverge when applied to the same actor; (3) no authority holds an explicit mandate, procedure, or program for the activity; and (4) observable uptake remains negligible despite formal capacity. For outbound digital trade by BUMDes, all four indicators are present, as the provisions and export and NIB data reviewed under RQ1 show, whereas a regulatory gap would satisfy only the third.

Village legal system: the logic of empowerment. Law No. 6 of 2014 and Government Regulation No. 11 of 2021 stipulate the logic of village-centered development. Performance is measured by the village's own source revenue (*pendapatan asli desa*) and contribution to local welfare. Supervision is carried out through village deliberations (*Musyawarah Desa*). In addition, the Ministry's registration, ranking, guidance, and procurement instruments under Ministerial Regulation No. 3 of 2021 are oriented toward local and regional markets. A system that creates legal capacity institutionally is indifferent to cross-border implementation, and neither the Ministry of Villages' regulations nor development programs cover any means of export preparation, international product standards, or platform orientation for foreign markets.

PMSE system: protective logic. Regulation of the Minister of Trade No. 31 of 2023 forms the operational core of Indonesia's e-commerce regulation, with a defensive focus. It is a

representative instrument of this kind. The minimum FOB price for foreign products sold directly in Indonesia is 100 USD (Article 19(2)), the separation of social commerce and payment facilitation, the Indonesian language disclosure obligation for foreign traders, the positive listing for direct imports, and the expansion of the registration standards of offshore platforms all aim to regulate inflows to protect domestic MSMEs. The protection provisions for small and micro enterprises in this regulation treat rural companies only as defense beneficiaries and never consider them as overseas participants. The regulation contains no provision, procedure, or institutional mandate addressing outbound cross-border sales by domestic merchants, including village enterprises. This is not a drafting oversight that can be solved by changing a single article. In the authors' interpretation, this absence reflects the circumstances in which the regulation was made: it replaced Regulation 50/2020 in September 2023 amid public controversy over low priced imports and social commerce, and commentators have read it primarily as a measure to protect domestic MSMEs from import competition (Rena et al., 2023). This account is offered as an interpretation of regulatory purpose supported by these sources, not as an established causal finding.

Export system: facilitation logic for established exporters. Indonesia's customs and export laws promote exports, including MSMEs, through simplified customs registration, MSME export financing schemes, and tariff regimes. However, these documents assume that stakeholders are well established in export trade. This means that they are familiar with HS classifications, hold product certifications, connect with freight forwarders, and have bank accounts for foreign exchange. It is made not for rural companies characterized by consistently weak management capacity, but for small-scale producers who are about to graduate (Pakpahan et al., 2025). The door to the official export system is open to BUMDes. However, there is no institutional bridge that leads BUMDes to that door.

The friction between these regimes is not only additive but also interactive. The village system creates legal personality and measures results in the region. The PMSE system regulates the digital channels used by these entities, but it only includes the direction of incoming goods from those channels. The export regime promotes export trade, but only for actors that are not produced by the other two regimes. Each regime is internally consistent and collectively produces a deadlock. BUMDes that hold legal entity status, an NIB, and marketable products therefore face a jurisdictional gap: no ministry holds a mandate for exports by village enterprises through digital platforms. This doctrinal gap is precisely the answer to the mystery raised in the introduction of this study. In other words, the regulatory asymmetry between complex inbound defenses and the absence of outbound architectures is structural, created by interactions among three regimes that were never designed to be read together.

Institutional and digital barriers at the village level (RQ2)

Regulatory friction works on top of the ability constraints described in the empirical literature on BUMDes and adds to them. Three clusters of constraints stand out. These clusters are not primary findings of this study; they are themes synthesized from the empirical studies cited below, which were grouped according to the type of constraint they report, and they are presented to show how capacity constraints interact with the regulatory friction identified above.

First, management ability and human resource ability. Studies on the implementation of Government Regulation No. 11 of 2021 report that village companies had difficulties with the certification process itself, document preparation, deliberation procedures, and electronic registration before commercial problems arose (Pakpahan et al., 2025). It is unrealistic to expect that institutions that struggle with domestic legal formalities will independently navigate HS codes, certificates of origin, sanitary and phytosanitary requirements, and foreign consumer protection laws.

Next, the status of product readiness and standards. The evidence on this point is limited and should be qualified by product type. Arifin et al. (2020) show that about one fifth of BUMDes are engaged in buying, selling, and distributing agricultural products and that the rapid growth in the number of BUMDes has not been matched by comparable growth in their utilization, while the goods exported by the few exporting BUMDes are largely primary agricultural and marine

commodities (Agusta, 2024). For processed food, cosmetics, and agricultural products that require certification, small and seasonal production volumes are a serious constraint; for commodities and handicrafts, the constraint lies mainly in the consistency of quality and volume. Cross-border platforms and destination market regulators demand consistency in the production, packaging, labeling, and village portfolios for food, cosmetics, and agricultural products, and certification schemes (halal, organic, food safety) impose high unit costs at village scale. Scale problems are structural and cannot be solved at the individual BUMDes level. That is why the aggregation instrument proposed under RQ3 are legally important.

Third, digital infrastructure and logistics. The literature on the digitization of BUMDes records substantial progress in the adoption of domestic digital marketing (Najmudin et al., 2024). Fitri et al (2025), however, the domestic market capability will not automatically shift to cross-border operations; Instead, international payment systems, currency management, cross-border logistics aggregation, and platform-specific onboarding requirements will be overlaid to the domestic baseline. The cost of rural logistics, i.e. the first mile from the village to the point of integration, remains a binding physical constraint, and the current Indonesian program does not treat the integration of the first mile of village exports as a clear policy target.

Malaysia's Facilitation-First Pathway and Its Relevance to BUMDes (RQ3)

The Digital Free Trade Zone (DFTZ) that was introduced by Malaysia in 2017 is an example of a state-initiated policy that aims to address the issues that are hindering small and medium-sized enterprises from taking part in international e-commerce. The idea for establishing the DFTZ came about in the process of implementation of the National eCommerce Strategic Roadmap of Malaysia and in collaboration between the Malaysian government and Alibaba Group. Unlike the creation of a new form of business entity, DFTZ provided the regulatory and operational environment where different processes were coordinated (Cui et al., 2025; Tham, 2018; Tham & Kam, 2019).

Consequently, the underlying framework for the DFTZ would be more policy-related and administration-oriented. Such an institution made use of established policies, processes, and regulations surrounding trade, customs, investment, and digital economy. Moreover, inter-agency cooperation and cooperation between government institutions and the private sector were utilized as well (Cui et al., 2025). The DFTZ should not, however, be characterized as a regulatory sandbox in the strict legal sense. A regulatory sandbox is a supervised and time limited framework in which regulators temporarily relax specific requirements for selected firms in order to test innovations, a model developed mainly in financial regulation (Zetzsche et al., 2017). The DFTZ instead operates through the existing free zone regime and ordinary customs law; its resemblance to a sandbox is only functional, in that simplified export documentation, customs processing, centralized fulfilment, and selected tariff benefits are concentrated in a bounded setting. In Malaysia, DFTZ is regulated essentially by the Free Zones Act 1990 (Act 438) and the Free Zones Regulations 1991; under section 3(1) of the Act, the Minister of Finance may declare any area a free commercial zone or a free industrial zone. The Act allows the Minister to declare free zones and sets the legal framework for activities inside them. Besides, the DFTZ also operates within Malaysia's trade rules and customs, so it is linked to the broader free zone's framework instead of a separate standalone law.

DFTZ had three main components that were connected to each other. Firstly, the e-fulfilment center close to Kuala Lumpur International Airport provided warehouse facilities, shipment consolidation, customs clearance, and international logistics. Secondly, the e-service center served as the virtual portal connecting the businesses with the services of e-commerce and the government. Lastly, the satellite services center would be aimed at attracting both local and international technology firms operating in the Southeast Asia market. The components mentioned above connect physical infrastructure with electronic platforms and the government, thus saving the SMEs the effort to deal with them separately (Hardaker, 2025).

In addition to the DFTZ design, there were community-based digital initiatives, especially eUsahawan and PEDi (*Pusat Ekonomi Digital*), which stands for Digital Economy Centre. While the former was meant to enhance digital entrepreneurial capabilities through digital marketing, e-

commerce, digitalization of businesses, and digital platforms usage, the latter provided Internet connections, digital facilities, and assistance to rural and underserved areas. In this way, the country's digital economy initiative moved beyond its national logistics and platform design by tackling local limitations ([Malaysian Communications and Multimedia Commission, 2022](#)).

The depiction of Malaysia using a "facilitation-first" approach appears well founded. In Malaysia, the government first prioritized investment in digital infrastructure, logistics, customs harmonization, entrepreneurship development, and platform access before forming the new joint rural enterprise. Meanwhile, Malaysia created a broad network of SME development that includes many ministries, organizations, programs, and incentives ([Kuriakose & Tiew, 2022](#)). Regulatory support could help foster technology adoption and the globalization of SMEs that act proactively especially in situations where the public sector reduces entry costs and lowers uncertainties ([Chew, 2024](#)).

However, the description of facilitation first strategy approach needs to be reconsidered. Having infrastructural support and government policies was not enough to guarantee participation in digital transformation processes by SMEs in Malaysia. According to Chin et al. ([2023](#)), about 40 percent of the participants in their study were pessimistic about the DFTZ initiative and did not see its potential benefits. This figure comes from a qualitative study based on two focus group sessions with 15 SMEs from different Malaysian states and industries, conducted online between June and July 2020 and analyzed using grounded theory procedures; it therefore describes the perceptions of those participants, not of Malaysian SMEs in general. The same participants cited an incompatible cost structure, inadequate digital infrastructure, and a lack of technical support and digital talent as the main reasons for hesitating to adopt e-commerce platforms. Moreover, Malaysian SMEs still face issues with technological capabilities, human resources, awareness about government policies, and readiness for digital transformation ([Muhamad et al., 2021](#); [Shahzad et al., 2023](#)).

At this point the comparative findings must be separated from the normative recommendation that follows. The comparative finding is descriptive: in Malaysia, these three functions were supplied by the state and its platform partner rather than by the SMEs themselves, and their effect remained dependent on SME capability. The recommendation that BUMDes Bersama should perform the same functions is the authors' normative proposal. The functions are transferable because each responds to a constraint that Indonesian BUMDes share with Malaysian SMEs, namely small consignments, unfamiliarity with platform requirements, and limited digital skills, and because Indonesian law already provides an entity that may consolidate and market village products (Government Regulation No. 11 of 2021, Articles 5 and 50). Direct transfer is nevertheless limited by four institutional differences: the DFTZ relied on a single large platform partner and a central fulfilment hub at an international airport, which Indonesia's archipelagic geography cannot replicate at village level; BUMDes are governed through village deliberation and village finances, which slows commercial decisions; Malaysia's free zone regime has no Indonesian counterpart designed for village producers; and the documented reluctance of SMEs toward the DFTZ shows that facilitation alone does not guarantee participation ([Chin et al., 2023](#)). The DFTZ is therefore treated as a source of functional lessons, not as a model to be replicated automatically. Table 4 summarizes the comparison along the seven dimensions.

Table 4

Functional comparison of Indonesia and Malaysia along seven dimensions

Dimension	Indonesia (BUMDes)	Malaysia (DFTZ and rural programs)	Transferability to BUMDes
Legal status of participant	BUMDes and BUMDes Bersama with legal personality (GR 11/2021 Art. 8(1))	Ordinary SMEs (companies, partnerships, proprietors); no village enterprise form	Indonesian advantage: a collective entity already exists

Dimension	Indonesia (BUMDes)	Malaysia (DFTZ and rural programs)	Transferability to BUMDes
Export licensing	NIB required; licenses for listed goods (MoT Reg. 23/2023 Art. 2)	Standard exporter requirements, simplified procedures for DFTZ users	Partly transferable through simplified procedures in a pilot
Customs facilitation	General procedures through the national single window; no rural e-commerce channel	eServices platform linking businesses and agencies; faster clearance at the e-fulfilment hub	Transferable in function (a single digital interface), not in form
Logistics and fulfilment	No first mile consolidation policy for village exports	e-fulfilment hub at KLIA Aeropolis with consolidation and warehousing	Transferable only through regional aggregation points; archipelagic geography limits a single hub
Platform onboarding	Ad hoc training and assistance programs (Gunawan et al., 2025; Nurofik et al., 2025)	Onboarding supported by MDEC and the platform partner	Transferable through collective onboarding by BUMDes Bersama
Digital infrastructure and capability	Uneven connectivity, funding, and digital literacy (Sitompul et al., 2025)	PEDi centers and eUsahawan training (Keling et al., 2025; MCMC, 2022)	Transferable through village digital centers; requires dedicated funding
Institutional coordination	Fragmented among the Ministry of Villages, Ministry of Trade, customs, and OSS	Coordination among MITI, MDEC, Royal Malaysian Customs, and Alibaba (Cui et al., 2025)	Requires a designated lead; basis for the joint sandbox proposal

Source: compiled by the authors from Chin et al. (2023), Cui et al. (2025), Hardaker (2025), and the regulations cited.

Firstly, BUMDes Bersama can serve as an exporter-consolidator of the logistics aspect. This means the company will be responsible for collecting products from several villages, coordinating warehousing and first-mile delivery, dealing with the logistics service provider and customs clearance. In particular, digitalisation of the logistics process is highly important in Indonesia, where the maritime geography increases the cost of the process (Iman et al., 2022).

Second, the role of BUMDes Bersama can be seen as institutionalizing the platform-onboarding approach. Rather than having each village-based producer registering himself individually, understanding the platform needs, and negotiating with the marketplaces, BUMDes Bersama can take care of joint registration, digital storefronts, branding, payment arrangements, and interactions with the marketplaces. Some of the experiences in Indonesia have shown that training and onboarding help BUMDes and rural MSMEs to open up their accounts in marketplaces and make better use of digital marketing instruments (Ayu, 2026; Gunawan et al., 2025; Nurofik et al., 2025).

Thirdly, access to platforms must be supplemented by continuous training. The managers of BUMDes as well as rural producers require support in developing digital skills, managing finances, presenting products, online marketing, documentation for exports, and compliance with regulations. Studies from Indonesian rural digitalization programs have revealed that mentoring and training tailored to local needs could help improve capacity, visibility in the markets, and use of digital platforms (Khoirunnisa, 2025; Nugroho et al., 2025; Priyadi et al., 2023; Silvianita et al., 2023). However, lack of funds, poor infrastructure, and varying degrees of digital literacy still remain major hurdles (Sitompul et al., 2025).

Discussion

Proposed BUMDes Export Aggregation Model (RQ3)

The analysis culminates in a proposal to use instruments that already exist in Indonesian

law. Government Regulation No. 11 of 2021 permits BUMDes Bersama, separate legal entities established by two or more villages through inter-village deliberation (Article 7(2)); it sets no upper limit on the number of participating villages, does not bind their establishment to administrative boundaries (Article 7(4)), and does not restrict their business classification. This study proposes to use this instrument as an export aggregator, that is, a district scale integrator that performs for member villages the export functions that individual BUMDes cannot perform. The model is a normative and conceptual proposal derived from the doctrinal and comparative analysis. It has not been validated empirically, and its operational and commercial feasibility remains to be tested in pilot projects.

This model consists of three elements. First, legal and institutional: BUMDes Bersama Ekspor represents member villages in NIB, customs registration, and product certification, consolidates production into verifiable and contractable quantities, and establishes contracts with platforms, forwarders, and payment providers as sole partners. Most of this element can be implemented under existing law, as detailed in Table 5: Government Regulation No. 11 of 2021 already allows a BUMDes Bersama to consolidate and market village products (Article 5), to establish trade and agency business units (Articles 49 and 50), and to cooperate with other parties (Articles 54 and 55). What is still required is ministerial guidance, not a new statute, that recognizes export aggregation as a business line of BUMDes Bersama and adjusts the Ministry of Villages' ranking and guidance instruments, together with a joint ministerial instrument for the sandbox and clarification of export financing within the limits of Article 48(2). Second, regulation: establish a regulatory sandbox jointly managed by the Ministry of Trade and the Ministry of Villages, appoint a pilot aggregator, simplify customs and certification procedures, establish a common jurisdiction base for outbound rural e-commerce for the first time, and address the gaps identified under RQ2. Third, facilitation: platform orientation agreements negotiated at the government and platform levels (Malaysia fulfills this function through the DFTZ partnership), first-mile logistics integration based on aggregator warehouses, digital capability programs delivered by villages, and the transformation of village-level economies into district-scale economies.

Figure 1 summarizes the model. Village producers and member BUMDes supply products to the BUMDes Bersama export aggregator, which holds legal entity status, an NIB, and export registrations; the aggregator consolidates, certifies, and ships products through first mile logistics and forwarders, lists them through platform onboarding agreements, and clears customs through the national single window. The pilot operates within a joint regulatory sandbox of the Ministry of Trade and the Ministry of Villages, while accountability runs back through inter-village deliberation, the supervisory function, audited reports, and ministerial ranking.

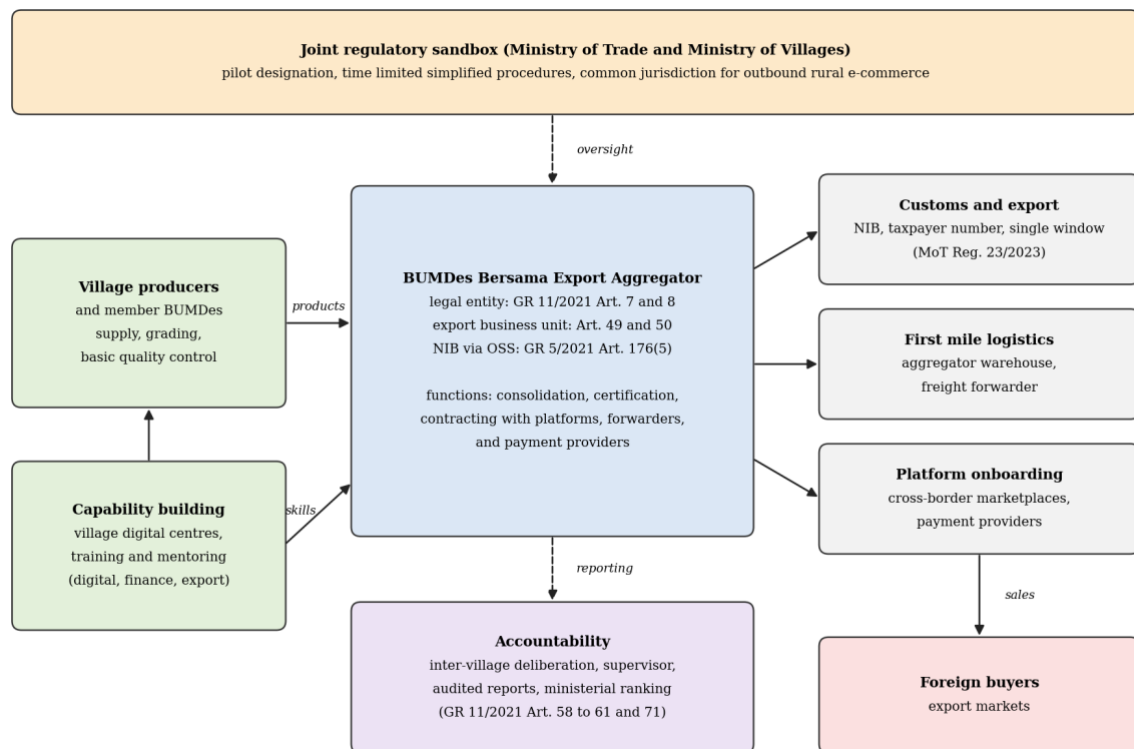


Figure 1. The proposed BUMDes Export Aggregation Model: actors, legal basis, and flows (normative proposal; source: developed by the authors)

Table 5

Legal basis for the proposed functions of BUMDes Bersama as export aggregator

Proposed function	Existing legal basis	Implementable under existing law?	Instrument still required
Establishment by several villages as a separate legal entity	GR 11/2021 Art. 7(2) to (4), 8(1)	Yes	None
Consolidating, buying, and marketing member villages' products	GR 11/2021 Art. 5(a) and (c)	Yes	None; recognition in ministerial guidance is advisable
Export business unit (distribution, trade, agency)	GR 11/2021 Art. 49, 50(c) and (f)	Yes	Articles of association of the business unit
NIB, export trade classification, and customs access	GR 5/2021 Art. 176(5); MoT Reg. 23/2023 Art. 2 and 4	Yes	None; facilitation of registration
Contracts with platforms, forwarders, and payment providers	GR 11/2021 Art. 54 and 55	Yes for domestic counterparties; foreign counterparties not expressly addressed	Ministerial guidance clarifying cooperation with foreign counterparties
Export working capital	GR 11/2021 Art. 48(2) (domestic sources only); Art. 70 (incentives)	Partly	Guidance on export financing schemes; possible amendment to allow trade finance

Proposed function	Existing legal basis	Implementable under existing law?	Instrument still required
Export aggregation as a recognized business line in ranking and guidance	MoV Reg. 3/2021; GR 11/2021 Art. 71 and 72	No explicit basis	Amendment of the ministerial ranking and guidance instruments
Joint regulatory sandbox for outbound rural e-commerce	No specific basis in the PMSE or village regimes	No	Joint ministerial regulation establishing the sandbox and its time limited exemptions
Simplified customs procedures for aggregated rural consignments	General customs rules	Partly	Regulation or directive of the Ministry of Finance (customs)

Note: abbreviations as in Table 1. Source: compiled by the authors.

The limitations of the model must be acknowledged. Consolidation centralizes governance risks: Accountability weaknesses recorded in the literature of single BUMDes Yuliani (2024) develop with capital. The sandbox designation leads to a selection bias in favor of districts that are already strong. And this model deals only with the institutional and regulatory layers. The competitiveness of the product in the destination market remains a commercial issue, that legal design cannot solve. These limitations define the boundaries between what can guide a path where regulatory reform does not exist and what cannot, namely a guarantee that it will work.

CONCLUSION

This study set out to answer three research questions. Regarding RQ1, Indonesian law currently in force gives BUMDes formal legal capacity to engage in cross-border digital trade: Government Regulation No. 11 of 2021 grants legal personality upon registration, imposes no territorial limit on their markets, and allows export business units, while the NIB and export rules apply the same entry requirements to BUMDes as to other business entities, subject to limits on domestic only borrowing and on restricted goods. Regarding RQ2, the barriers are institutional rather than doctrinal: the village, PMSE, and export regimes pursue the divergent logics of local empowerment, domestic market protection, and facilitation for established exporters, and no authority holds a mandate for outbound rural e-commerce, producing an institutional stagnation that village level capacity constraints reinforce. Regarding RQ3, Malaysia's facilitation-first experience offers functional lessons in logistics consolidation, platform onboarding, and capability building rather than a template, since the DFTZ itself shows limited uptake; Indonesia can supply these functions through BUMDes Bersama acting as export aggregators within a joint regulatory sandbox, largely under existing law and ministerial guidance.

The main contribution of the study is to reposition BUMDes as potential subjects of trade law, to map provision by provision the friction among three regimes that apply to a single legal entity, and to propose an institutional model grounded in existing instruments. Its policy implications are that the Ministry of Villages should recognize export aggregation as a business line of BUMDes Bersama, that the Ministry of Trade should add an outbound facilitation pathway to the next revision of the PMSE regime, and that both ministries should pilot a joint regulatory sandbox. Because the study is doctrinal and relies on documentary sources, it establishes the structure of the regulatory constraints but not their weight relative to commercial constraints, and the proposed model has not been validated empirically. Future research should therefore conduct fieldwork at several pilot aggregation sites, measure first mile logistics costs, and extend the comparison to other ASEAN facilitation frameworks.

AUTHOR CONTRIBUTION STATEMENT

Rani Santika contributed to the conceptualization, research design, legal analysis, data collection, and manuscript preparation. Rafi Farizki contributed to the literature review, analysis

of Indonesian regulatory frameworks, and drafting of the manuscript. Zainal Amin Ayub contributed to the comparative analysis of Malaysia's digital trade and rural digital economy policies and provided critical review of the manuscript. Arif Rohman Hakim contributed to the interpretation of the findings, manuscript revision, and critical evaluation of the final version. All authors reviewed and approved the final manuscript.

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