EISSN: 2622-9668|PISSN: 2622-982X
Volume 9 Nomor 1 Februari 2026: 63-82
DOI: 10.30996/jhbbc.v9i1.132400
Jurnal Hukum Bisnis Bonum Commune

Regulating the Space Above Land in Indonesia: Toward a Business Law-Based Framework for Legal Certainty and Vertical Development

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Article History:
Submitted:
06-08-2025
Received:
02-01-2026
Accepted:
23-01-2026

Keywords:
space above land; legal certainty; spatial; license

Abstract

This article critically examines the fragmented legal regulation of airspace above land in Indonesia, emphasizing its incompatibility with the Basic Agrarian Law. Despite the increasing demand for vertical urban development, Indonesian statutory instruments governing spatial use, buildings, and land rights remain conceptually and normatively disconnected, resulting in significant legal uncertainty. Employing a doctrinal legal research method, this study analyzes philosophical, dogmatic, and normative dimensions of airspace regulation to identify inconsistencies that undermine the coherence of the land law system. From a business law perspective, the absence of clearly defined, transferable, and registrable rights over airspace poses substantial obstacles to commercial transactions, investment security, and financing in the real estate sector. Developers and investors face heightened legal risk due to the lack of a distinct legal status for airspace as an object of rights. To address these challenges, the article undertakes a comparative analysis of Singapore and Japan, jurisdictions that recognize airspace as a separate legal object subject to specific regulatory and licensing regimes. Drawing from these comparative insights, the article proposes the adoption of an airspace licensing regime in Indonesia. Such reform would harmonize airspace regulation with the Basic Agrarian Law, enhance legal certainty, support vertical urban expansion, and create a more investment-friendly framework for Indonesia's rapidly growing property and infrastructure sectors.

1. Introduction

In contemporary governance, the role of the state within a modern economy encompasses multiple functions, as originally conceptualized by Wolfgang Friedmann and still relevant in recent scholarly discourse. One primary function is the provision of social services to ensure a minimum standard of living for all citizens, which includes access to education, healthcare, and welfare programs.[1] The state also acts as an entrepreneur, participating directly in economic activities, particularly in sectors where private investment is lacking or where strategic interests require public ownership.[2] Furthermore, the state assumes the role of a regulator, formulating and enforcing laws to protect both collective public interests and individual rights, while also maintaining market fairness and addressing externalities.[3] Lastly, the state serves as a neutral arbiter within the judicial system, mediating disputes and ensuring justice through an impartial legal framework.[4] These functions

[1] L. Lahat, "Street-level Bureaucrats as Policy Entrepreneurs and Collaborators: Findings From Israel and Germany," *European Policy Analysis* 9, no. 1 (2023): 86–101, https://doi.org/10.1002/epa2.1173.
[2] S.R Hiatt and J.B Grandy, "State Agency Discretion and Entrepreneurship in Regulated Markets," *Administrative Science Quarterly* 65, no. 1 (2020): 1–41, https://doi.org/10.1177/0001839220911022.
[3] Hiatt and Grandy, "State Agency Discretion and Entrepreneurship in Regulated Markets."
[4] Lahat, "Street-level Bureaucrats as Policy Entrepreneurs and Collaborators: Findings From Israel and Germany."

underscore the evolving responsibilities of the state in balancing economic efficiency with social justice and legal order.

To implement the third function as articulated by Friedmann—that of the state acting as a regulator—the Indonesian government enacted Law of the Republic of Indonesia No. 11 of 2020 concerning Job Creation. In its subsequent development, this law was declared conditionally unconstitutional by the Constitutional Court. Consequently, it was repealed and replaced by Government Regulation in Lieu of Law No. 2 of 2022 concerning Job Creation (commonly referred to as the Perppu No 2/2022), which was later ratified into law through Law of the Republic of Indonesia No. 6 of 2023 concerning the Enactment of Government Regulation in Lieu of Law No. 2 of 2022 concerning Job Creation as Law (hereinafter referred to as the Job Creation Law). This regulation was enacted to improve the investment climate as part of efforts to strengthen Indonesia's economy. However, in several aspects, it still contains legal uncertainties, particularly regarding the regulation of the space above land.

Hashami and Octariana (2023) provide a legal-theoretical foundation by exploring the principle of horizontal separation of land rights, which is essential in any regime that seeks to treat airspace as distinct from the land parcel below. Their research advocates the urgent need for codified legal instruments that enable the separation of rights by elevation. This separation would allow for individual or corporate ownership of air volumes that are detached from the ground rights, a concept already accepted in countries such as Japan and the Netherlands.[5] Hermawan (2021) adds depth by examining agrarian principles that underpin the control of underground and upper-ground spaces. His findings reiterate that the Law No. 5 of 1960 on Basic Agrarian Law (UUPA)'s silence on vertical dimensions creates legal vacuums. He suggests integrating vertical spatial control into the core structure of national land law and proposes a redefinition of land that explicitly includes vertically projected spaces, a reform essential for ensuring legal certainty in urban planning.[6] The work connects legal ambiguity with environmental outcomes, showing how unregulated vertical space use contributes to environmental degradation and urban congestion. They call for legal reforms not only to define rights but also to manage impacts on light, air flow, and public access. Their recommendation for integrated legal-environmental frameworks aligns with modern urban governance principles.

The lack of legal instruments to govern this vertical dimension is also examined by Ismail and Kadarudin (2025), who highlight how uncoordinated statutory instruments lead to enforcement dilemmas. Their research identifies institutional fragmentation as a primary barrier to implementing effective legal protection, suggesting the need for a harmonized legal structure across multiple regulatory domains.[7] The absence of explicit legal recognition of airspace as a separable and independently registrable object of property rights presents serious implications for Indonesia's real estate and infrastructure markets. Developers engaging in

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[5] Fauzi Hashami and Nynda Octariana, "Asas Pemisahan Horizontal Hak Atas Ruang Bawah Tanah," *E-Jurnal: Spirit Pro Patria* 9, no. 1 (2023), https://doi.org/10.29138/spirit.v9i1.2232.

[6] Sapto Hermawan, "Pengaturan Ruang Bawah Tanah berdasarkan Prinsip Agraria Nasional," . . *Number* 16, no. 1 (2021).

[7] Ismil Alrip and Kadarudin, "Problematika Penggunaan Ruang Bawah Tanah dari Aspek Yuridis," *HERMENEUTIKA : Jurnal Ilmu Hukum* 5, no. 2 (2021): 406–14, http://dx.doi.org/10.33603/hermeneutika.v3i2.

vertical expansion, such as rooftop commercial spaces, elevated bridges, or stacked apartments, encounter legal uncertainty that deters long-term investment. Without the ability to register airspace as a discrete right, investors face risks related to enforceability, collateralization, and transferability of interests.[8] These risks are compounded by the absence of a standard legal mechanism for defining, measuring, or certifying airspace volumes.

From a business law perspective, legal certainty is foundational for commercial transactions involving immovable property.[9] The inability to secure title or legally recognized claims over airspace makes it difficult for developers to obtain project financing, as lenders cannot rely on airspace as a secured asset. This restricts access to capital and limits the development of secondary markets[10] for air rights. Compared to jurisdictions where airspace rights are clearly defined and transferable, Indonesia lacks the legal instruments to support complex vertical property transactions. Without reform, the country risks missing opportunities for innovation in real estate and infrastructure and may fall behind in regional competitiveness. Bringing in a commercial law lens to the regulation of airspace is not only a legal necessity but a strategic move to unlock vertical land value and ensure sustainable urban growth.

2. Methods

This study is structured as a doctrinal legal study. Terry Hutchinson stated that doctrinal legal study analyzes legal concepts, legal principles, legal cases, and every related statute. Terry Hutchinson further explains that a doctrinal legal study consists of two steps: first, identifying the law, including the statutes, principles, cases, and concepts, and the second, analyzing the legal problems in this study, connecting them with the statutes, principles, cases, concepts, and then structuring the answer for the problems in a systematic analysis.[11]

3. Results and Discussion

3.1. The Philosophical Problems of Space above Land Regulation in Indonesia

1. Historical Perspective and the Development of Indonesian Agrarian Law

Legal politics fundamentally refers to the state's basic policy direction that determines the form, substance, and orientation of the laws to be enacted. According to Mahfud MD, legal politics operates on two levels: first, permanent legal politics, which comprises enduring legal principles such as judicial review conducted by constitutional courts; and second, periodic legal politics, which is embodied in statutory law.[12] Within this framework, three dimensions of legal politics are central to this dissertation's focus on agrarian law: the philosophical-theoretical foundation that underpins agrarian regulations; the normative dimension represented in written legislation; and the positivist dimension, which views land law strictly

[8] Mariya Letdin, "Under the Lender's Looking Glass," *The Journal of Real Estate Finance and Economics* 55, no. 4 (2017): 435–56, https://doi.org/10.1007/s11146-016-9561-4.
[9] Guido Calabresi and A. Douglas Melamed, "Property Rules, Liability Rules, and Inalienability: One View of the Cathedral," *Harvard Law Review* 85, no. 6 (1972): 1089, https://doi.org/10.2307/1340059.
[10] Giovani Marcello and Rafi Mastiyanto, "Intellectual Property as an Object of Banks Collateral in Startup Development in Indonesia (Comparation Study of Singapore and Malaysia)," *Journal of Private and Commercial Law* 7, no. 1 (2023), https://doi.org/10.15294/jpcl.v7i1.44338.
[11] Terry Hutchinson and Nigel Ducan, "Defining and Describing What We Do: Doctrinal Legal Research," *Deakin Law Review* 17, no. 1 (2012): 83–119, https://doi.org/10.21153/dlr2012vol17no1art70.
[12] Mahfud MD, *Membangun Politik Hukum, Menegakkan Konstitusi* (RajaGrafindo Persada, 2011).

as *wet* (formal legislation), rather than *recht*, which encompasses customary law or *living law* in society.

Understanding the legal politics of Indonesia's agrarian sector necessitates an exploration of the historical development of land law in Indonesia. The philosophical underpinnings of land policy are inseparable from this evolution. Historically, Indonesia's land law is divided into two periods: the colonial land regime that prevailed prior to independence and the enactment of the *Undang-Undang Pokok Agraria* (UUPA) in 1960; and the post-independence national agrarian law, which began with the UUPA's ratification. Each of these periods reflects markedly different legal and political orientations toward land control and ownership.

Colonial agrarian law was dualistic in nature, combining indigenous customary law with Western civil law principles. As noted in the preamble and general explanation of the UUPA, this dualism failed to provide legal certainty for indigenous landholders and was shaped by colonial objectives, not national interests. During the VOC era, oppressive land policies such as *contingenten*, *verplichte leverantien*, and *roerendiensten* were implemented. These policies forced indigenous peasants to surrender crops or perform unpaid labor, all to serve the economic interests of the colonial state. Despite nominal recognition of customary rights, actual land control remained concentrated in colonial hands, with the people treated as mere cultivators rather than rightful owners.[13]

Subsequent colonial rulers further entrenched land exploitation. Governor-General Daendels institutionalized *particuliere landerijen* (private estates) by selling indigenous land to European, Chinese, and Arab settlers. These estates granted landlords feudal powers (*landheerlijke rechten*) such as taxation, forced labor, and administrative control over local populations.[14] Similarly, Governor Raffles introduced the *land rent* system, empowering village heads to collect taxes and reallocate land arbitrarily, resulting in dispossession of peasants who could not meet their obligations. These measures transformed land from a communal asset into a colonial commodity controlled by the state or its affiliates.[15]

The codification of the *Agrarische Wet* (1870) and the *Agrarisch Besluit* (1870) marked a pivotal moment in colonial land politics. The latter introduced the *domein verklaring* principle, which stated that all land without formal proof of ownership was state property. While customary tenure was widely practiced, most indigenous land was undocumented and thus claimed by the state under this doctrine. This legal presumption facilitated land leases to private enterprises for up to 75 years under *erfpacht* arrangements, enabling large-scale plantations while relegating indigenous landholders to the status of tenants or squatters. The *domein verklaring* effectively denied indigenous people the right to land security, entrenching a system of structural inequality.[16]

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[13] Departemen Penerangan & Direktorat Jenderal Agraria Departemen Dalam Negeri, *Pertanahan Dalam Era Pembangunan Indonesia* (Jakarta: Direktorat Publikasi Dirjen, PPG Departemen Penerangan & Ditjen Agraria Departemen Dalam Negeri, 1982).
[14] Sudikno Mertokusumo, *Hukum Dan Politik Agraria* (Karunika, 2008).
[15] Boedi Harsono, *Hukum Agraria Indonesia : Sejarah Pembentukan Undang-Undang Pokok Agraria, Isi Dan Pelaksanaannya*, 1st ed. (Djambatan, 2003).
[16] Santoso Urip, *Hukum Agraria: Kajian Komperhensif* (Kencana Prenada Media Group, 2012).

From this historical overview, it is evident that colonial land policy was driven not by principles of justice or legal certainty, but by economic exploitation. The central objective was to extract raw materials and agricultural surplus from the archipelago at the lowest possible cost and sell them at a high profit for the benefit of colonial powers. This commercial motivation shaped the legal structure of land regulation during the colonial period. In contrast, post-independence agrarian reform, as enshrined in the UUPA, was designed to reverse these inequities by recognizing customary land rights, ensuring tenure security, and establishing land as a means of national welfare rather than private enrichment. The history of Indonesia's national agrarian law commenced with the country's independence on August 17, 1945. However, the establishment of a comprehensive national land law did not occur instantaneously but required a prolonged period of legal development. To prevent legal vacuum during this transitional phase, Article II of the Transitional Provisions of the 1945 Constitution stipulated that all existing state institutions and regulations remain in effect until new laws are enacted in accordance with the Constitution of the Republic of Indonesia. Consequently, colonial-era land regulations and institutions were still applicable so long as they did not conflict with the 1945 Constitution and had not been repealed or replaced by new legislation.

The 1945 Constitution (UUD 1945) provides the political-legal foundation for national agrarian law, especially in Article 33(3), which mandates that "The earth, water, and natural resources contained therein are controlled by the state and used for the greatest prosperity of the people." This provision imposes a binding obligation on the state to ensure that land and natural resource management maximizes public welfare. It marks a clear departure from colonial legal frameworks by emphasizing collective benefit and state stewardship over natural assets. Following independence, the Indonesian government undertook several steps to adapt colonial land law to the new national context and needs. These steps included adopting new policies and interpretations aligned with Pancasila and Article 33(3) of the Constitution, which redefined the state's role from landowner to custodian of land power on behalf of the people. The government also abolished feudal land rights and conversion practices prevalent in regions like Surakarta and Yogyakarta, as well as the exploitative system of *particuliere landerijen* (private estates), through legislative acts such as Law No. 1 of 1958, which eliminated these estates and restored the lands as state property.

Further reforms targeted regulations concerning land leasing by indigenous peoples, especially to large plantations and non-indigenous parties. Pre-independence lease limits, such as the 21.5-year maximum under colonial ordinances, were revised through Emergency Law No. 6 of 1951, which restricted lease periods to one crop cycle for certain commodities and introduced ministerial oversight on rental fees. Additionally, Law No. 24 of 1954 and its amendments established tighter controls on land transfers by requiring ministerial approval, thereby strengthening state supervision over agrarian transactions.

The enactment of the UUPA marked a significant advancement by revoking numerous colonial statutes and unifying agrarian regulation under a national framework consistent with Indonesia's sovereignty and social justice ideals. The UUPA abolished discriminatory colonial laws and established a legal system aimed at achieving prosperity, happiness, and fairness for the Indonesian people. It recognizes indigenous customary rights (*hak ulayat*) as long as they

align with national interests, and establishes various land rights—ownership, cultivation, building use, and usage rights—that can be held by individuals, communities, or legal entities. The UUPA articulates several fundamental agrarian rights. First, it defines the nation's supreme land right (*hak bangsa*), encompassing all Indonesian territories and natural resources, which is eternal and cannot be revoked as long as the nation exists. Second, it clarifies the *state's right of control* (*hak menguasai negara*), whereby the government manages land for the welfare of its people. Third, the law acknowledges indigenous communal rights (*hak ulayat*) as legal entitlements of customary law communities, emphasizing collective ownership and stewardship. Fourth, it codifies individual land rights, permitting private ownership and usage rights that derive from the nation's supreme right.[17] These rights include *hak milik* (ownership), *hak guna usaha* (cultivation rights), *hak guna bangunan* (building use rights), and *hak pakai* (usage rights), as well as temporary rights such as leases and mortgages. The UUPA also extends to regulate rights over water and airspace, ensuring comprehensive governance of land-related resources.

In response to rapid development and population growth, land scarcity for housing has driven a shift in residential construction towards vertical structures. This transformation has led to the increasing prevalence of multi-storey housing developments, including both low-income flats (*rumah susun*) and luxury apartments, particularly in urban centers. These housing types reflect a shift in urban planning to accommodate a growing urban population within limited spatial boundaries.

Ownership of apartment units is not regulated under UUPA but is instead governed by specific legislation. Article 4(1) of the UUPA affirms the granting of land rights to individuals, but Law No. 16 of 1985 on Apartments, later replaced by Law No. 20 of 2011, serves as the primary legal framework for condominium ownership. The law recognizes different terms—such as apartment, flat, condominium, or strata title—but all refer to vertical housing. In commercial practice, developers often use terms like "apartment" to target higher-income consumers, while "*rumah susun*" typically refers to public or affordable housing. Law No. 20 of 2011 defines an apartment as a functionally segmented multi-storey building containing independently owned units alongside common elements. These include shared building parts (e.g., stairs, foundations, walls), shared objects (e.g., communal gardens, places of worship, parking areas), and shared land. This bundle of rights is indivisible and collectively managed, distinguishing apartment ownership from conventional land rights.

Article 7 of Law No. 16 of 1985, maintained in subsequent laws, states that apartments must be built on land with recognized titles: freehold, building use rights, usage rights, or management rights. In cases where the land is under management rights, developers must convert it into building use rights before selling apartment units. This requirement ensures legal certainty for the land forming part of the shared ownership structure. Although the UUPA does not explicitly mention "management rights" (*Hak Pengelolaan*), the concept evolved from colonial-era beheersrecht and was later formalized in Government Regulation No. 8 of 1953 and Ministerial Regulation No. 9 of 1965. Management rights provide state bodies or government institutions with delegated control over land for institutional or third-party use.

[17] Winarsih Sri, *Seri Hukum Agraria Nasional: Prinsip Prioritas Dalam Sistem Hukum Agraria Indonesia* (Jakad Media Publishing, 2021).

Government Regulation No. 40 of 1996 defines it as a form of state authority with partial delegation to rights holders, primarily for land distribution and planning.

Land registration is central to securing property rights in Indonesia. Stemming from Roman and Dutch cadastral systems, land registration involves the systematic collection and updating of spatial and legal data. Article 19 of the UUPA and Government Regulation No. 24 of 1997 mandate land registration to provide legal certainty, public access to data, and orderly administration. These principles reflect the doctrines of specialiteit (specificity) and openbaarheid (publicity), requiring precise identification and public accessibility of land records. Land registration principles—simplicity, security, affordability, up-to-dateness, and transparency—ensure accessibility and reliability for both the state and individuals. According to legal scholars like Urip Santoso, these principles safeguard public interest and support efficient land administration. Notably, registration encompasses not only rights to land but also apartment units and related rights, such as mortgages and state land claims, as regulated under Article 9 of Government Regulation No. 24/1997.[18]

Recent legal developments have introduced the concept of "air space rights" (*ruang atas tanah*), as regulated under Article 1(5) of Government Regulation No. 18 of 2021. These refer to volumes above the ground surface that may be separately utilized, owned, or managed, distinct from the underlying land. Although not explicitly named as a new right under current law, Article 146(1) of the Omnibus Law (UU Cipta Kerja) permits the granting of building use rights, usage rights, or management rights over these spaces. This reflects a functional expansion of the horizontal separation principle in land law, recognizing the growing demand for vertical spatial utilization in dense urban environments.

2. Philosophical Problems

Based on the previous sub-chapter of this study, the philosophical foundation of land rights in Indonesia indicates that airspace above land does not fall within the scope of land rights due to several fundamental considerations. Ontologically, land rights are abstract legal constructs that refer specifically to ownership or control over the earth's surface. The UUPA and related land regulations in Indonesia consistently define land rights in relation to the surface of the earth. Derivative rights such as *Hak Guna Bangunan* (Right to Build), *Hak Pakai* (Right to Use), and *Hak Pengelolaan* (Right of Management) are all linked to this notion of surface-bound property. Accordingly, the classification of airspace as part of land, as set out in Government Regulation No. 18 of 2021 (PP 18/2021), is ontologically inconsistent with the foundational understanding of land rights, which exclusively concern the earth's surface.

Epistemologically, the concept of land rights in Indonesia is deeply rooted in colonial legal traditions, particularly the Dutch colonial land law, which was later restructured through the enactment of the UUPA. One of the most significant epistemological shifts introduced by the UUPA was the abolition of the *domein verklaring* principle, which had previously allowed the colonial state to assert ownership over all unregistered land. The elimination of this principle brought greater clarity to the definition of land rights, narrowing their scope to the physical surface of the earth and explicitly excluding the vertical dimensions above and below.

[18] Santoso Urip, *Pendaftaran Dan Peralihan Hak Atas Tanah*, 2nd ed (Kencana Prenada Media Group, 2011).

This legal-historical context reinforces the view that airspace should not be considered a component of land rights as recognized in Indonesian agrarian law.

From an axiological perspective, the principal purpose of land rights in the Indonesian legal system is to provide legal certainty over land ownership and control, particularly in the aftermath of independence and land reform. The UUPA articulates a postcolonial vision of equitable land distribution and protection of citizens' rights to land, especially traditional or *ulayat* rights. The emphasis is placed on tangible, physical land ownership and the systematic registration of such rights. The value system underpinning land law does not extend to the vertical space above the land, since it neither serves the same practical function nor guarantees the same legal certainty as rights over the earth's surface. Consequently, the inclusion of airspace within the domain of land rights lacks axiological justification.

Furthermore, the functional purpose of land rights as instruments of social justice and legal protection is undermined by the extension of these rights to airspace. Airspace, by its very nature, involves a more fluid and transient set of uses—ranging from infrastructure to commercial exploitation—that are not necessarily connected to the occupation or cultivation of land. As such, the attempt to subsume airspace into the legal category of land introduces conceptual ambiguity and threatens the coherence of the land tenure system. Instead of enhancing legal clarity, it risks producing overlapping claims, administrative confusion, and weakening protections afforded under the UUPA. In light of these ontological, epistemological, and axiological considerations, it becomes clear that the regulation of airspace should be treated as a separate legal domain, governed by a distinct legal framework. The current approach under PP 18/2021, which merges airspace into the definition of land, not only contradicts the philosophical basis of land rights but also undermines the integrity of Indonesia's agrarian legal order. A more coherent legal policy would recognize airspace as a distinct spatial entity, subject to its own rules of use, registration, and rights allocation—independent from the system of land rights established under the UUPA.

From a business law standpoint, rights must be clearly defined, transferable, and registrable to be functional in commercial practice. The current legal framework in Indonesia[19] does not allow airspace to meet any of these criteria. The surface-bound nature of land rights under the UUPA means airspace can only be used as far as it is necessary for land use, which falls short of creating a proprietary or marketable interest in vertical space. This conceptual limitation creates barriers for developers, investors, and financial institutions that seek to engage with airspace as a standalone asset. Legal clarity is essential for commercial reliability. Business actors need strong legal foundations for rights they wish to lease, transfer, finance, or use for long-term development. The current ambiguity surrounding airspace introduces significant risk into such transactions. For instance, rooftop developments, elevated pedestrian corridors, or even advertising billboards suspended above roads all operate in legal gray areas. The lack of legal status for these uses means the developments themselves may be subject to challenge.

Although the ontological and epistemological foundations of land law in Indonesia logically exclude airspace from the definition of land, this exclusion weakens the legal

[19] Dani Ramdani Sukirman et al., "Tranfers of Right to Individual Owned Land to The Company," *JILPR Journal Indonesia Law and Policy Review* 6, no. 2 (2025): 217–28, https://doi.org/10.56371/jirpl.v6i2.353.

infrastructure needed for vertical commercial expansion. Rather than undermining philosophical coherence, recognizing airspace as a separate legal domain would adapt existing doctrine to modern urban realities. It would also allow the state to maintain control over spatial resources while supporting economic innovation and legal certainty in the business sector.

3.2 The Status of Space above Land: A Dogmatical Problem

As Indonesian cities undergo rapid vertical development, the question of who owns, governs, and can legally utilize the space above land has become increasingly relevant. Multi-level buildings, skybridges, overpasses, and rooftop commercial installations all occupy the vertical dimension of space—commonly referred to as "airspace." Yet, despite this growing reality, Indonesia's legal system has yet to fully acknowledge airspace as a distinct and autonomous legal object. The existing framework, particularly within the UUPA, is still rooted in a two-dimensional land paradigm, which sees property as defined by horizontal boundaries.[20] Recognizing this deficiency, the Indonesian government attempted to introduce a new legal basis for airspace rights in Law No. 11 of 2020, which was later replaced by Law Number 6 of 2023 concerning the Enactment of Government Regulation in Lieu of Law Number 2 of 2022 on Job Creation into Law (hereinafter reffered as Job Creation Law). Article 146 of this law provides that rights may be granted over land or space formed in the air or underground, including the Right to Build (HGB), Right to Use (*Hak Pakai*), and Right of Management (HPL). While this marks an important normative shift, the provision remains highly abstract. It fails to specify key technical and legal aspects, such as how the boundaries of airspace rights are to be measured and delineated; how such rights relate to existing land titles; whether airspace can be sold, inherited, or mortgaged separately from the land beneath; and how these rights are to be recorded within the national land registration system. In line with that, the study by Adnan, Lubis, and Putra (2025) reinforces this problem by analyzing the protection mechanisms for airspace and subsurface utilization under Indonesian spatial planning laws. Their work underscores the inadequacy of current regulations to provide clarity or enforceability, particularly when spatial claims arise vertically rather than horizontally. The authors argue that while the legal framework references "space" in abstract, it does not concretely define how such space should be quantified, bounded, or registered.[21]

Indonesia has long recognized the principle known as horizontal separation. According to Urip Santoso, this principle is reflected in Article 44 paragraph (1) of the UUPA, which stipulates: "An individual or a legal entity may hold a leasehold right over land if they are entitled to use land owned by another party for building purposes, upon payment of a certain amount of money as rent to the landowner.".[22] Furthermore, Article 4 paragraph (2) of the UUPA provides that "Land rights authorize the holder to use the land in question along with the subsoil and natural resources contained therein, as well as the water and airspace above it,

[20] Daniel W. Nirahua et al., "Study Of Legal Regulation for The Utilization of Ownership Rights Above Land (Air Space)," *International Journal of Scientific and Research Publications (IJSRP)* 12, no. 8 (2022): 459–72, https://doi.org/10.29322/IJSRP.12.08.2022.p12855.
[21] Ali Adnan et al., "Perlindungan Hukum Dalam Pemanfaatan Ruang Atas Dan Ruang Bawah Tanah Berdasarkan Undang-Undang Penataan Ruang," *Jurnal Kerta Semaya* 13, no. 4 (2025): 501–5013, https://doi.org/10.24843/KS.2025.v13.i04.p01.
[22] Urip, *Hukum Agraria: Kajian Komperhensif*.

to the extent necessary for purposes directly related to the use of the land."[23] This provision illustrates that land rights are limited to the use of the land itself, while objects situated above the land (such as buildings or vegetation) may be owned separately, as long as such ownership remains functionally connected to the land's use. This reflects a clear dual-dimensional paradigm in the legal regulation of land.[24] However, this legal framework creates a structural mismatch between normative provisions and the spatial realities of contemporary urban life.

Under Article 1, paragraph (1) of the UUPA, land is defined narrowly as the surface of the earth, without mention of the air above or the subsurface below. Article 4, paragraph (1) goes slightly further, stating that a right over land provides authority to use not only the land itself but also "the space above it, as far as necessary for the use of the land." The phrase "as far as necessary" reveals a limitation: it restricts the authority of landowners over the vertical plane, permitting use of the airspace only when it directly serves the function of the land itself. This clause implicitly denies the possibility of airspace being held or controlled independently of the ground parcel beneath it. In legal practice, this has made it extremely difficult for parties to claim exclusive rights to airspace separate from land ownership.

This limitation has serious consequences. For example, if a private company wishes to construct a skybridge that connects two buildings above a public road, or if a telecommunications provider seeks to install aerial infrastructure above privately owned land, the current legal framework offers no straightforward mechanism for acquiring or registering a distinct right over the relevant volume of airspace. Any such arrangement must rely on ad hoc contracts or temporary permits that lack property status and are not supported by the land registration system. The legal vacuum in airspace management leads to overlapping interests and lack of synchronization.[25]

In relation to registration, the central issue surrounding the registration of airspace above land lies in the legal inconsistency concerning its status—specifically, whether airspace is to be considered an integral part of land. This inconsistency is evident in the diverging definitions of land found in the UUPA, the Job Creation Law, and Government Regulation No. 18 of 2021 (PP 18/2021). Article 1 point 1 of PP 18/2021 defines airspace as a component of land. Meanwhile, Article 146(1) of the Job Creation Law stipulates that land may be formed within airspace, whereas Article 4(1) of the UUPA strictly defines land as the surface of the earth. Logically, this implies that airspace is not inherently part of land in terms of ownership or control—a view reinforced by the earlier-stated definition of airspace. Consequently, Article 77 of PP 18/2021, which permits the granting of land rights such as management rights (*Hak Pengelolaan*), building use rights (*Hak Guna Bangunan*), and usage rights (*Hak Pakai*) over airspace, appears to contradict the provisions of the UUPA.

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[23] Sri Harini Dwiyatmi, "Asas Pemisahan Horizontal (Horizon Scheiding Beginsel) dan Asas Perlekatan (Vertiale Accessie) dalam Hukum Agraria Nasional," *Refleksi Hukum: Jurnal Ilmu Hukum* 5, no. 1 (2020): 125–44, https://doi.org/10.24246/jrh.2020.v5.i1.p125-144.

[24] L Warsito, "Ownership and Control of Land Rights in the Legal System of Indonesia," *Jurnal Hukum Sehasen* 10, no. 1 (2024): 217–26, https://doi.org/10.37676/jhs.v10i1.5899.

[25] Jorry Soleman Koloay, "Kekosongan Hukum dalam Pengelolaan Ruang Udara di Indonesia," *Jurnal Keamanan Nasional* 7, no. 1 (2021): 60–70, https://doi.org/10.31599/jkn.v7i1.494.

This contradiction arises because the rights enumerated above are legally recognized as derivative of land rights under the UUPA.[26] For example, building use rights and usage rights, both of which fall under the category of land rights as defined in Article 16(1) of the UUPA, can only be granted over state land or land with existing ownership rights.[27] As stipulated in Article 37 of the UUPA, and reaffirmed in PP 18/2021, building use rights may be granted over state land, privately owned land, or land under management rights. Similarly, Article 41(1) of the UUPA limits the granting of usage rights to state land, land held under private ownership, or land subject to management rights. Therefore, the legal implication of the inconsistent definitions between PP 18/2021 and the UUPA is that the conferral of building use rights, usage rights, or management rights over airspace is incompatible with the overarching legal framework established by the UUPA. As airspace is not legally classified as land under the UUPA, it cannot be subject to land rights derived from it. Furthermore, as a subordinate regulation, PP 18/2021 may not legally override the provisions of the UUPA, which holds a superior legal status as a statute.

The inconsistency also extends to the regulation of airspace utilization. Article 4(2) of the UUPA provides that land rights entitle holders to use the land as well as the subsurface, water, and airspace above it only to the extent necessary for purposes directly related to the land's use, and within the boundaries set by statutory regulations. Meanwhile, Article 24 of the Job Creation Law affirms that the use of airspace must conform to relevant statutory provisions. Accordingly, any construction in airspace should be functionally tied to the land beneath it. In contrast, Article 1, point 5 of PP 18/2021 defines the use and utilization of airspace as independent from the land parcel itself, which stands in direct contradiction with the UUPA and the Job Creation Law. This contradiction is exemplified by current practices such as commercial structures built over pedestrian bridges in Tanah Abang and Glodok, or flyovers in Antasari–Blok M, originally intended to ease traffic but subsequently used for commerce. Another example includes the Cosmo Park residential area atop Thamrin City Mall, which is marketed and leased as a separate property.

Based on these observations, it is evident that inconsistencies persist in the legal framework regarding the registration of airspace. Although Article 1, point 5 of PP 18/2021 categorically includes airspace as part of land, there exists no provision outlining a distinct registration mechanism for it. This contrasts with the well-established procedures for registering building use rights, usage rights, and management rights, which rely on foundational land status such as *ulayat* land, land with private ownership rights, or land under management rights. Furthermore, Articles 4, 36, and 51(1) of the UUPA do not recognize airspace as a valid basis for the conferment of such rights, thereby rendering Article 1 point 5 of PP 18/2021 internally inconsistent.

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[26] Hidayanti et al., "The Land Legal System in Indonesia and Land Rights According to the Basic Agrarian Law (UUPA)," *LEGAL BRIEF* 11, no. 1 (2021): 336–78, https://legal.isha.or.id/index.php/legal/issue/view/30.

[27] Farida Tuharea et al., "Sinkronisasi UUPA Terhadap Peraturan Perundang-Undangan di Bidang Penetapan dan Penggunaan Hak Atas Tanah," *UNES Law Review* 6, no. 3 (2024): 9135–47, https://doi.org/10.31933/unesrev.v6i3.

If airspace is to be legally categorized as land, then there must be a clear mechanism for its registration. Yet, Article 76(1) of PP 18/2021 only states that the utilization of airspace shall be determined by a Ministerial Decree, without providing further legal clarity. If, as previously defined, airspace constitutes a newly formed spatial unit, it logically necessitates an initial land registration process. However, this process is absent from the regulatory framework. Finally, Article 76 of PP 18/2021 fails to fulfill the essential legal elements of land registration, as previously described. The absence of such clarity has resulted in legal uncertainty. Developers, investors, and even government entities are left without a clear path to secure legal protection over the airspace they seek to use or commercialize. In most cases, agreements involving airspace are processed as permits or memoranda of understanding, not as registered property rights. This lack of legal standing significantly limits the enforceability and transferability of such arrangements and raises the risk of disputes. Further, Suwardi and Boediningsih (2024) emphasize the juridical ambiguity in using upper and lower land spaces, noting a significant disconnect between statutory language and practical implementation. Their analysis shows that various laws intersect, agrarian law, building regulation, and environmental law, yet none articulate a systematic recognition of airspace as a proprietary right. This overlap results in inconsistent administrative handling and discourages developers from innovating vertically.[28]

The inability to treat airspace as a distinct and registerable property object generates commercial uncertainty for all parties involved in vertical development. Business transactions involving airspace—such as rooftop leasing, skybridge construction, or vertical integration between buildings—are typically handled through private contracts or temporary government permits. These instruments offer only short-term or project-specific protections and lack the enduring enforceability that comes with recognized property rights. This regulatory gap also limits access to finance and investment. If a developer wishes to lease or mortgage airspace, the absence of a recognized title or registrable interest prevents lenders from accepting airspace as collateral. As a result, airspace cannot be easily securitized, sold, or included in asset-backed transactions. This prevents capital from flowing into vertical developments and reduces the economic efficiency of urban real estate markets, especially in dense cities where horizontal expansion is no longer viable.

Furthermore, the absence of integration between airspace use and the land registration system complicates enforcement, introduces the risk of overlapping claims, and leads to legal fragmentation. For Indonesia to foster efficient urban growth and attract real estate investment, the legal system must evolve to allow airspace to function as a commercial asset. Recognizing and regulating airspace as a separate legal object would resolve this dogmatic tension and support the practical needs of modern business.

3.3. Commercialization of Space above Land

1. Space above Land Regulation in Singapore and Japan

In Singapore, the concept of air rights, or the space above land, is legally recognized as distinct from the land itself. This separation grants landowners the right to utilize the airspace above their property without considering it an integral part of the land in a broader legal sense.

[28] Suwardi and Widyawati Boediningsih, "Aspek Yuridis Penggunaan Ruang Atas dan Bawah Tanah Ditinjau dari Perundang-Undangan di Indonesia," *INNOVATIVE: Journal Of Social Science Research* 4, no. 3 (2024): 2156–68, https://doi.org/10.31004/innovative.v4i3.10544.

Several key statutes provide a robust legal foundation for this separation, including the Building Control Act (Cap. 29), the Planning Act (Cap. 232), the Land Titles Act (Cap. 157), and the Civil Aviation Act (Cap. 6). The Building Control Act regulates the use of airspace in relation to construction and building safety. While landowners may develop the airspace above their property, any construction or alteration involving this airspace must receive prior approval from the Building and Construction Authority (BCA). Article 4(1) explicitly requires a building permit for any work affecting the airspace, demonstrating that airspace is treated as a separate right requiring formal authorization, rather than an automatic extension of land ownership.

Under the Planning Act, the Urban Redevelopment Authority (URA) governs the use of airspace through urban planning and zoning regulations. Development that involves the use of airspace, such as high-rise buildings or other infrastructure, must obtain written permission from the URA to ensure compliance with broader city planning objectives. Article 15(1) reinforces that airspace utilization for development purposes is a distinct right, subject to specific governmental approval separate from land ownership. The Land Titles Act provides further legal clarity by treating land and airspace as separate entities for ownership and transactional purposes. Landowners have the ability to sell, transfer, or lease not only the land but also the rights to use the airspace above it. This separation allows for more flexible property transactions and affirms that airspace rights can be isolated from the physical land itself, as indicated in Article 33 of the Act. Additionally, the Civil Aviation Act establishes important restrictions on airspace use for safety reasons. The Civil Aviation Authority of Singapore (CAAS) controls the height of buildings and other structures to safeguard air navigation and aviation safety. Airspace can be designated as controlled space by ministerial notification, highlighting that airspace rights are regulated independently from land rights, particularly to protect flight paths and public safety.

Collectively, these legal provisions illustrate that air rights in Singapore empower landowners to develop the airspace above their land within a regulated framework. The Building Control Act mandates that construction projects receive BCA approval to ensure structural safety, while the Planning Act requires URA's consent for alignment with urban planning. If a landowner wishes to build structures such as skybridges between buildings, they must secure permits from both authorities. Moreover, if the development is near flight paths, CAAS approval is essential to avoid interference with aviation operations. There are important limitations on airspace use. Landowners cannot erect structures that compromise aviation safety without CAAS authorization, nor can they violate zoning laws enforced by URA. Unauthorized developments may lead to legal sanctions. Thus, all constructions affecting the airspace must comply with a comprehensive regulatory regime that balances property rights, public safety, and orderly urban development.

Singapore's approach to air rights distinctly separates the legal status of airspace from land ownership, providing landowners with conditional rights to develop vertically while ensuring that such developments adhere to building safety standards, urban planning requirements, and aviation regulations. This multifaceted legal framework exemplifies a sophisticated system of managing space above land to optimize land use and maintain public interests.

In Japan, air rights, commonly referred to as rights to the space above land, are legally recognized as distinct from land ownership itself, although their exercise necessarily involves the landowner who holds the underlying property. While landowners possess the right to manage the airspace above their property, this right is not absolute and is subject to stringent regulatory frameworks. Legally, airspace is not classified as a component of the land. Instead, the right to utilize the airspace above land is governed by laws and regulations enacted at both the national and local government levels. Landowners may employ the airspace for construction or other structural purposes; however, such use must comply with the restrictions established by applicable regulations. A key piece of legislation regulating airspace utilization is the Building Standards Act (建築基準法, Kenchiku Kijun-hō), which prescribes safety standards and rules for spatial usage in building construction. For example, a building owner intending to construct a skybridge, an elevated pedestrian bridge connecting two buildings, must first obtain the requisite permissions.

Typically, the construction of such skybridges, which affect both the structural integrity of buildings and public spatial usage, requires authorization from the relevant authorities. In Japan, this approval is generally granted by local governments or the respective Bureau of Urban Development, responsible for overseeing urban planning and airspace management. Additionally, because skybridge construction may impact the surrounding environment, developers must ensure compliance with zoning regulations and height restrictions established under the Building Standards Act. Furthermore, if the project involves airspace that could interfere with air traffic or is situated near an airport, the building owner must secure a permit from the Japan Civil Aviation Bureau (JCAB) to ensure that the structure does not compromise aviation safety.

Certain prohibitions apply to airspace holders in Japan. Primarily, building owners are forbidden from erecting structures that jeopardize public safety or impede public access rights to airspace. These restrictions include limitations on building heights or other constructions that could disrupt air traffic flow or adversely affect the local environment. The Building Standards Act rigorously enforces these requirements to safeguard public safety and urban quality of life. Structures built within the airspace must comply with the safety and technical standards mandated by governmental authorities. Construction without the necessary permits from the relevant authorities is strictly prohibited. Failure to obtain the required approvals may result in legal sanctions, including orders to demolish unauthorized structures. This enforcement authority is established under the Building Standards Act, which empowers the government to ensure adherence to safety regulations and conformity with applicable building codes.

Regarding the legal classification of airspace in Japan, it is unequivocally not considered a physical part of the land. The distinction between land and airspace is codified in the Civil Code of Japan (民法, Minpō), which delineates that while landowners have rights to use the airspace above their land, these rights are constrained by laws regulating public space use and aviation safety. Moreover, airspace rights are often regarded as transferable or usable for specified purposes, yet they do not inherently form part of the land itself.

Several statutes provide the legal foundation for airspace utilization and construction therein, notably:

1. Building Standards Act (*Kenchiku Kijun-hō*), Articles 6-1 and 7-1: Article 6-1 stipulates, "Any construction work shall comply with the standards prescribed by this Act to ensure the safety, health, and well-being of the people." Article 7-1 further mandates, "Structures shall not exceed the height limits or interfere with the safety of surrounding areas."
2. Civil Code of Japan, Article 207: This article provides that "The right to use the air space above a piece of land is part of the right of ownership of the land, but this right is limited by laws, regulations, and public interest."

Consequently, while landowners in Japan hold rights to utilize the airspace above their property, these rights are not absolute and are subject to various regulations relating to urban planning, public safety, and aviation. Airspace users must secure permissions from relevant authorities—such as local governments, the Japan Civil Aviation Bureau (JCAB), or local building and construction authorities—before commencing construction.

The division of authority for issuing airspace usage permits is as follows:

1. Bureau of Urban Development: At the local government level, this agency is responsible for regulating and granting permits for developments involving airspace usage. It ensures that urban planning, zoning, and safety regulations are adhered to within its jurisdiction. Legal backing includes the City Planning Act (**都市計画法**, *Toshikeikaku-hō*) Article 7, which mandates local governments to implement urban development consistent with approved city master plans, and Article 10 of the Building Standards Act, which regulates permits related to airspace structures and their urban impact.
2. Japan Civil Aviation Bureau (JCAB): JCAB oversees construction that may interfere with air traffic or is proximate to airports. Under the Civil Aviation Act (**航空法**, Kōkūhō) Article 8, JCAB must approve any structures that could compromise aviation safety or exceed height restrictions.
3. National Land Agency: For large-scale land use changes affecting broader regional or national land management, the National Land Agency may issue permits. The National Land Use Planning Act (**国土利用計画法**, *Kokudo Ryōyō Keikaku-hō*) Article 6 requires approval for significant land development projects with wide-reaching spatial impacts.

Drawing from the regulatory frameworks in Singapore and Japan, the authority to issue permits for airspace use rests with designated government bodies, typically at the local or regional level. Accordingly, it is advisable for Indonesia to similarly delegate such authority to regional governments. Although Indonesia currently lacks a specialized agency exclusively responsible for airspace rights, the existing permit issuance mechanism via the OSS-RBA system allows applications for airspace utilization permits to be processed through the regional Investment and One-Stop Integrated Services Office (Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu).

Theoretically, grounded in the principles of Indonesia's unitary state and regional autonomy, the rationale for delegating airspace use permit authority to local governments is that spatial resources are ultimately state-owned, yet their utilization and impacts are local in nature. Thus, decentralization and extensive regional autonomy are appropriate, provided

that there is coordinated spatial planning synergy from the central government down to provincial and municipal levels.

2. Reconstruct the Space above Land Regulation in Indonesia

In the rapidly urbanizing cities of the 21st century, spatial limitations on the ground have pushed development efforts upward, making vertical expansion not just a matter of engineering, but also of legal and commercial strategy. Airspace—the column of space above the ground—has emerged as a valuable economic asset. Across the globe, jurisdictions have developed legal mechanisms that allow this intangible yet quantifiable resource to be transferred, leased, or collateralized. In Indonesia, however, despite a legal basis introduced in the Job Creation Law, airspace remains a legally ambiguous and commercially underutilized domain. This section explores the global practice of airspace commercialization and evaluates the readiness and constraints of Indonesia's legal infrastructure in accommodating the same. Arbianzah (2025**)** evaluates the legal policy vacuum surrounding underground space, which mirrors the gaps found in airspace governance. His study argues that commercialization is hindered not only by the absence of clear regulations but also by the lack of institutional capacity to enforce them. He recommends integrated governance frameworks for both vertical dimensions.[29]

In line with that, learning from Singapore and Japan regululatory framework, the regulation of airspace rights above land through a licensing regime is necessary due to the current practice whereby the utilization of such space—whether for public facilities or commercial purposes—is conducted under a permit system. Both forms of airspace use are subject to regulatory approval. For commercial purposes, typically under private ownership, the legal basis lies in the utilization permits as stipulated in Government Regulation No. 15/2010. However, this differs from Government Regulation No. 18/2021, which does not address ownership of the constructed airspace itself but only the land foundations connected by the airspace. Notably, Government Regulation No. 15/2010 presents regulatory gaps, such as the lack of clarity on ownership rights over the airspace and the absence of provisions for levying fees to local governments, despite Article 2 paragraph (4) of the Basic Agrarian Law (UUPA) indicating that such authority should reside with local administrations. In contrast, airspace used for public facilities, such as flyovers, is not intended for commercialization but similarly requires permits, as exemplified by the Minister of Transportation Regulation No. PM.36/2011 concerning intersections between railway lines and other structures, alongside Government Regulation No. 15/2010.

Licenses for airspace utilization are granted at the regency or city government level, reflecting the hierarchical and synergistic nature of spatial planning, where local spatial plans (RTRW Kabupaten/Kota) constitute the ultimate regulatory framework to be observed. Such licensing is differentiated between commercial use and public facilities, with several considerations. First, for commercial airspace utilization permits requested by private individuals, the underlying land must be owned or controlled by the same individual or granted permission by the landowner upon whose land the airspace is founded—ensuring legal certainty and protection for landowners. Second, consent from all parties whose land is

[29] Mahendra Arbianzah, "Kajian Hukum Pengaturan Pemanfaatan Ruang Bawah Tanah," *Warkat* 4, no. 2 (2024): 1–15, https://doi.org/10.21776/warkat.

traversed by the airspace is mandatory, serving as legal protection against adverse impacts. Third, an analysis of traffic impact (Andal Lalin), as mandated by Article 99 of Law No. 22/2009 on Road Traffic and Transportation, is required if the airspace use might disrupt safety, orderliness, or traffic flow. Fourth, local governments are authorized to levy fees on privately controlled structures within the airspace. Fifth, the erection of buildings in the airspace must comply with building approval regulations (PBG), including building function, classification, and technical planning standards as regulated under Government Regulation No. 16/2021. Lastly, airspace utilization permits must align with local spatial plans, as demonstrated by the necessity of Activity Utilization Conformity Approvals. Thus, airspace permits do not stand alone but must integrate with other permits such as traffic impact assessments and building consents to ensure legal certainty and protection for all affected stakeholders.

Furthermore, airspace regulation through a licensing framework requires formal codification within a dedicated statutory instrument or government regulation. This is essential to address the inconsistent legal foundations surrounding airspace usage, especially the discord between the Omnibus Law on Job Creation, which underpins Government Regulation No. 18/2021, and the UUPA, which governs agrarian issues, including land and spatial matters. This regulatory disharmony necessitates the enactment of a specific law on airspace to reconcile conflicting provisions and provide clarity. In this regard, the Spatial Planning Law (UU Penataan Ruang) should be revised to explicitly define airspace rights, establish regulatory mechanisms, specify vertical utilization limits, and integrate these aspects into regional spatial plans (RTRW). Likewise, the Job Creation Law requires amendment, particularly Article 77, which currently permits airspace utilization through granting land rights, a principle fundamentally at odds with the national agrarian legal framework. The revision must clarify that airspace is not an object of land rights under UUPA but a utilization right subject to a permit system. Consequently, provisions in the Job Creation Law and its implementing regulations, such as Government Regulation No. 18/2021, that allow airspace use through Building Use Rights (*Hak Guna Bangunan*) or Management Rights (*Hak Pengelolaan*) should be reformed to align with the principle that airspace is not part of the land itself, but regulated via spatial plan-based permits rather than property rights. This revision will prevent an expansive vertical interpretation of land rights, uphold the state's control over spatial resources, and strengthen legal certainty for businesses and local governments in the use of airspace.

Adopting a licensing framework for airspace would provide a commercially viable solution to current regulatory inconsistencies. By allowing airspace to be treated as a distinct, licensable spatial unit, the government could enable businesses to legally acquire rights over vertical volumes for specific uses, such as skybridges, rooftop venues, or overpass commerce. This would eliminate the current dependence on case-by-case permits and ambiguous contracts, giving legal certainty to long-term commercial activities. Such a system would also unlock new investment opportunities in cities where horizontal land supply is limited. Developers would be empowered to treat airspace as a strategic asset, either for internal use or for lease to third parties. Local governments, in turn, could collect fees or taxes on the commercial use of airspace, thus integrating vertical planning into broader urban economic

development. The result would be a more flexible and dynamic real estate market capable of supporting both public infrastructure and private enterprise.

However, for this to be effective, airspace rights must be clearly defined by statute and linked to the land registration system, even if categorized separately from traditional land ownership. Doing so would not only align with good governance and planning principles but also strengthen investor confidence, reduce legal disputes, and allow for the development of market mechanisms, such as air rights trading or securitization, that are essential for a modern, investment-friendly legal environment.

4. Conclusions

The regulation of space above land in Indonesia remains legally fragmented and commercially unviable under the current agrarian legal framework. The UUPA, which narrowly defines land as the surface of the earth, offers no clear legal foundation for recognizing airspace as a distinct, registrable property right. While recent legislative efforts, such as the Job Creation Law and Government Regulation No. 18 of 2021, have attempted to broaden the legal conception of land to include vertical space, these efforts are plagued by internal contradictions, unclear registration mechanisms, and doctrinal misalignment with the UUPA. As a result, the airspace above land continues to exist in a legal vacuum, with no coherent regime governing its ownership, transfer, or commercial use. From a business law perspective, this regulatory ambiguity poses significant barriers to investment, urban development, and market efficiency. In commercial transactions, the enforceability, transferability, and registrability of rights are essential to reducing legal risk and unlocking capital. Yet, in the context of airspace, developers and investors are forced to rely on ad hoc contracts or temporary permits that offer limited legal protection and lack status within the national land registration system. This not only discourages innovation in vertical real estate and infrastructure projects but also prevents airspace from being used as a bankable asset in financing arrangements. Without clearly defined rights, airspace cannot be leased, mortgaged, securitized, or valued accurately, leaving businesses exposed to regulatory uncertainty and legal disputes.

To resolve these challenges and support a commercially responsive legal environment, Indonesia must undertake structural legal reform that reclassifies airspace as a distinct spatial and legal entity governed through a permit-based regime. Rather than treating airspace as an extension of land rights, the state should establish a licensing and registration framework integrated with spatial planning systems and responsive to market needs. This would allow airspace to function as a commercial asset, promote investment certainty, reduce transaction costs, and align national property law with global urban development practices. Ultimately, modernizing airspace regulation through a business law lens is essential for enhancing Indonesia's competitiveness, legal integrity, and economic sustainability in an increasingly vertical urban future.

5. Acknowledgments

I express my deep appreciation to the people around me for their encouragement and contributions throughout the process of writing this article. I hope that the results of this research will be widely beneficial to many.

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