

INTISARI

Industri *Unmanned Aerial Vehicle* (UAV) di Indonesia menunjukkan potensi pertumbuhan yang signifikan dengan proyeksi nilai pasar mencapai USD 93 juta pada tahun 2028. Penelitian ini bertujuan untuk menganalisis faktor internal dan eksternal yang memengaruhi daya saing industri UAV di Indonesia serta merumuskan strategi kompetitif yang sesuai bagi perusahaan lokal.

Metode penelitian menggunakan pendekatan kualitatif deskriptif dengan studi kasus pada tiga perusahaan anggota Asosiasi Sistem Teknologi Tanpa Awak (ASTTA). Data dikumpulkan melalui wawancara semi terstruktur dengan *C-level* dan data sekunder. Analisis dilakukan dengan mengintegrasikan kerangka VRIO, PESTEL, *Porter's Five Forces*, SWOT, dan *Porter's Generic Competitive Strategies*.

Hasil penelitian menunjukkan bahwa kekuatan utama perusahaan UAV Indonesia terletak pada sertifikasi TKDN, kolaborasi riset, adaptasi kebutuhan lokal, kolaborasi, serta diversifikasi model bisnis. Sebaliknya, kelemahan utama meliputi permodalan, infrastruktur R&D, dan komponen teknologi tinggi dari impor. BETA unggul pada manufaktur komposit dan aplikasi militer, AMX unggul pada teknologi VTOL dan pemetaan tambang, sementara FDS berfokus pada ekosistem pertanian serta kolaborasi berbasis HAKI.

Dari sisi eksternal, peluang terbesar meningkatnya permintaan UAV di sektor pertanian, pemetaan, dan pertahanan. Ancaman terbesar meliputi tidak adanya bea masuk CBU, ketiadaan KBLI industri UAV, pembatasan akses teknologi, dominasi produsen global, fluktuasi nilai tukar, serta regulasi yang belum sinkron. Penelitian ini merekomendasikan strategi *differentiation* focus yang ditopang oleh efisiensi rantai pasok, penciptaan nilai tambah melalui *drone as a service*, serta penguatan layanan purna jual.

Penelitian ini menawarkan roadmap pengembangan UAV nasional dalam tiga fase: (1) konsolidasi kapabilitas internal dan integrasi teknologi, (2) penguatan ekosistem melalui regulasi, riset, insentif fiskal/non-fiskal, serta peran aktif ASTTA, dan (3) diplomasi global untuk menjadikan Indonesia pemain strategis UAV di ASEAN. Penelitian ini berkontribusi dengan menyediakan kerangka strategi kompetitif berbasis roadmap jangka panjang yang dapat dijadikan acuan bagi perusahaan, pemerintah, dan asosiasi dalam memperkuat daya saing industri UAV Indonesia di pasar nasional dan global.

Keyword : Roadmap Industri manufaktur UAV Indonesia, Analisis VRIO, Analisis PESTEL, Analisis SWOT, Analisis *Porter Five Forces*, *Porter's Generic Competitive Strategies*, Strategi Kompetisi.

ABSTRACT

The Unmanned Aerial Vehicle (UAV) industry in Indonesia demonstrates significant growth potential, with its market value projected to reach USD 93 million by 2028. This study aims to analyze the internal and external factors influencing the competitiveness of Indonesia's UAV industry and to formulate appropriate competitive strategies for local companies.

This research employs a descriptive qualitative approach with case studies of three member companies of the Indonesian Unmanned Systems Technology Association (ASTTA). Data were collected through semi-structured interviews with C-level executives and secondary sources. The analysis integrates the VRIO framework, PESTEL, Porter's Five Forces, SWOT, and Porter's Generic Competitive Strategies.

The findings reveal that the key strengths of Indonesian UAV companies include local content (TKDN) certification, research collaboration, adaptation to local needs, industry collaboration, and diversified business models. In contrast, the main weaknesses involve limited capital, insufficient R&D infrastructure, and dependence on imported high-tech components. Specifically, BETA excels in composite manufacturing and military applications, AMX in VTOL technology and mining mapping, while FDS focuses on agricultural ecosystems and intellectual property (IP)-based collaborations.

Externally, the most promising opportunities stem from the rising demand for UAVs in agriculture, mapping, and defense. The major threats include the absence of CBU import tariffs, the lack of UAV-specific industry classification (KBLI), restricted access to technology, the dominance of global manufacturers, exchange rate volatility, and unsynchronized regulations. This study recommends a *differentiation focus strategy* supported by supply chain efficiency, integrated value creation through drone-as-a-service models, and enhanced after-sales services.

Furthermore, the study proposes a national UAV development roadmap in three phases: (1) consolidation of internal capabilities and technology integration, (2) ecosystem strengthening through regulations, research, fiscal and non-fiscal incentives, and the active role of ASTTA, and (3) global diplomacy to position Indonesia as a strategic UAV player within ASEAN. This research contributes by providing a long-term competitive roadmap framework that can serve as a reference for companies, policymakers, and associations in strengthening the competitiveness of Indonesia's UAV industry in both domestic and global markets.

Keywords : Indonesia UAV manufacture industry roadmap, VRIO analysis, PESTEL analysis, SWOT analysis, *Porter Five Forces* analysis, *Porter's Generic Competitive Strategies*, Strategi Kompetisi.