

## CIVIL LIABILITY FOR DAMAGES CAUSED BY ARTIFICIAL INTELLIGENCE: A SYSTEMATIC LITERATURE REVIEW OF THE DOCTRINES OF STRICT LIABILITY, VICARIOUS LIABILITY, AND THE NEED FOR REFORM OF INDONESIAN CIVIL LAW

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### Abstract

The development of artificial intelligence (AI) poses new challenges for Indonesian civil law, particularly regarding the attribution of liability for damages caused by autonomous systems. This systematic literature review analyzes the relevance of the doctrines of *strict liability* and *vicarious liability* to AI-related damages, identifies the limitations of the *fault-based* Articles 1365 and 1367 of the Indonesian Civil Code, and formulates the need for reform of Indonesian civil law. *Strict liability* is effective for high-risk AI by relieving victims of the burden of proving fault, while *vicarious liability* is suitable for multi-party ecosystems through the principle of supervision. However, the *black-box* nature and autonomy of AI demand a *risk-based regulatory* approach incorporating a *presumption of fault*, *joint liability*, and algorithmic transparency obligations. Reform is necessary through an Indonesian AI Liability Directive (*lex specialis*) amending the Civil Code, strengthening technology-related judicial infrastructure, and ensuring ASEAN harmonization, thereby balancing Industry 5.0 innovation with the protection of human rights.

**Keywords:** artificial intelligence, civil liability, *strict liability*, *vicarious liability*, Civil Code reform, *risk-based regulation*, technology law.

### Introduction

The development of artificial intelligence (AI) technology over the past few decades has brought significant changes to various sectors of life, ranging from industry, healthcare, transportation, to public services. AI is no longer merely a tool but has evolved into a system capable of making independent decisions based on machine learning and big data analysis. This situation gives rise to new legal consequences, particularly when AI decisions or actions cause harm to individuals or society—consequences not fully anticipated by the conventional civil law framework (Sulistio & Salsabilla, 2023).

In the context of civil law, the principle of liability for unlawful acts (*onrechtmatige daad*) as stipulated in Article 1365 of the Civil Code requires the presence of fault as the basis for liability. However, the autonomous and adaptive nature of AI raises fundamental questions regarding who should be held liable when harm occurs. Whether developers, users, manufacturers, or even the AI system itself can be considered legal entities has become an increasingly complex debate (Binns, 2018).