



DOI: <https://doi.org/10.38035/jlhr.v1i2>
<https://creativecommons.org/licenses/by/4.0/>

The Role of Collaboration Strategy and Regulation in Enhancing the Competitiveness of Legal Products: The Mediating Effect of Regulatory Effectiveness

Hamdan Hamdan¹, Hapzi Ali²

¹Universitas Mercu Buana, Jakarta, Indonesia, hamdan@mercubuana.ac.id

²Universitas Bhayangkara Jakarta Raya, Jakarta, Indonesia, hapziali@gmail.com

Corresponding Author: hamdan@mercubuana.ac.id¹

Abstract: This study aims to analyze the effect of collaboration strategy and regulation on the competitiveness of legal products and to examine the mediating role of regulation in this relationship. Competition among legal products has become increasingly complex due to the presence of illegal imported goods that do not comply with established standards, safety requirements, and documentation completeness. This research adopts a quantitative approach with an explanatory research design. Primary data were collected through questionnaires distributed to business actors engaged in legal products and were analyzed using SEM-PLS. The results indicate that collaboration strategy has a positive and significant effect on both regulation and competitiveness. Regulation also exerts a positive and significant influence on competitiveness and mediates the relationship between collaboration strategy and competitiveness. These findings confirm that the synergy between strategic collaboration and regulatory effectiveness fosters a conducive market ecosystem, enhances legal compliance, strengthens product standards and safety, and promotes competitive advantage for legal products. The study provides theoretical implications for the development of an integrative collaboration-regulation-competitiveness model, as well as managerial implications for strengthening product legality strategies.

Keyword: Collaboration Strategy, Regulation, Competitiveness, Legal Products.

INTRODUCTION

The level of competition for legal products in both domestic and global markets has become increasingly complex due to the growth of trade flows, digitalized distribution channels, and easier consumer access to a wide range of product options. Legal products not only compete with legitimate imported goods but also face pressure from illegal products that often offer lower prices because they do not comply with standards, safety requirements, documentation completeness, or tariff obligations. This situation creates market distortions that can reduce the competitiveness of legal products, especially when supervision and law

enforcement are not fully effective (Indra & Hamdan, 2024). In this context, the competitiveness of legal products is no longer determined solely by cost efficiency and product quality (Ali et al., 2020; Simorangkir & Ali, 2025) but also by institutional factors such as regulatory effectiveness and stakeholder collaboration strategies.

Previous studies have generally examined competitiveness from an internal perspective, focusing on innovation, operational efficiency, and marketing strategies (Ibrahim & Ali, 2023; Saputra et al., 2024; Sari & Ali, 2024; Siahaan et al., 2020; Wiranti & Ali, 2025). Meanwhile, research on regulation has primarily emphasized legal compliance or its impact on the investment climate in general. Studies on strategic collaboration have largely focused on improving marketing performance or brand reputation (Hamdan et al., 2023) without explicitly linking collaboration to the mitigation of illegal products and the enhancement of legal product competitiveness (Hamdan et al., 2025). Thus, a research gap remains regarding the integration of collaboration strategies and regulation as simultaneous determinants of legal product competitiveness, particularly in facing competition from illegal imported products that fail to meet standards and legal requirements.

Furthermore, prior research has shown limitations in addressing collaboration with external actors, such as influencers, media, certification bodies, and marketplaces, as part of mechanisms to strengthen the regulatory ecosystem (Susiang et al., 2024). In practice, however, synergy between strategic collaboration and regulatory effectiveness has the potential to create a fairer, more transparent, and more competitive market environment. The lack of studies connecting product standards, safety requirements, import documentation completeness, and tariff policies with collaboration strategies and regulatory quality reveals a significant and relevant research gap that warrants further investigation.

Based on this background, the research problems of this study are: (1) how collaboration strategy affects the competitiveness of legal products, (2) how regulation affects the competitiveness of legal products, and (3) how the synergy between collaboration strategy and regulation strengthens the competitiveness of legal products amid competition from illegal imported products. The study aims to conceptually analyze the relationship between collaboration strategy and regulation in enhancing legal product competitiveness, identify the role of each aspect in shaping competitive advantage, and provide strategic recommendations to support the creation of a conducive, equitable, and sustainable market ecosystem. Subsequently, the literature review and previous studies are discussed to develop the research hypotheses.

Collaboration Strategy and Regulation

The collaboration strategy literature emphasizes that collaboration among external actors, such as businesses, government, or public institutions, can strengthen an organization's position in accessing resources, markets, and innovation capabilities (Batory & Svensson, 2020; Talias, 2021). However, these studies tend to focus on the benefits of collaboration for marketing or innovation, with limited explicit discussion on how collaboration relates to the effectiveness of regulatory implementation. This creates a conceptual inconsistency because, while collaboration can enhance regulatory compliance, the literature provides insufficient explanation of how strategic collaboration can systematically influence the quality of regulatory formulation and implementation for legal products. Studies integrating both concepts remain limited, even though in practice, both are interconnected in building market legitimacy (public-private collaboration and regulatory frameworks). Based on this, it is hypothesized that:

H1: Collaboration strategy positively affects regulation in the context of legal products.

Collaboration Strategy and Competitiveness

Previous research widely emphasizes that collaboration strategy adds value to organizations by expanding market reach, sharing resources, and fostering innovation, all of which are key contributors to organizational competitiveness (Hamdan et al., 2023; Ibrahim et al., 2024). Other studies also highlight the contribution of collaboration to marketing effectiveness and network expansion, thereby strengthening competitive positioning. However, some studies do not distinguish between collaboration aimed at legal compliance, such as ensuring product legality, and general collaboration for innovation or marketing purposes (Owusu Kwateng et al., 2022). This inconsistency leaves the conceptual link between collaboration strategy and competitiveness underdefined, particularly in markets characterized by competition between legal and illegal products. Accordingly, it is indicated that:

H2: Collaboration strategy positively influences the competitiveness of legal products.

Regulation and Competitiveness

The relationship between regulation and competitiveness has been extensively discussed in economic and management literature. Stell and Iwashita (2024) argue that stringent regulations can stimulate innovation and enhance firm competitiveness by compelling organizations to innovate in response to regulatory demands (Fabrizi et al., 2024). However, meta-analyses indicate that, while empirical evidence supports the innovative potential of regulation, consensus has not been reached regarding the strength and consistency of regulation's role in broadly enhancing competitiveness (Tu & Shi, 2023). This highlights an inconsistency in the literature: some studies view regulation as a cost burden for businesses, whereas others argue that it can increase competitiveness by driving strategic innovation. Based on this discussion, it is suggested that:

H3: Regulation positively affects the competitiveness of legal products.

Regulation as a Mediator

Research explicitly examining the mediating role of regulation in the relationship between collaboration strategy and competitiveness remains very limited in the academic literature. Some studies in general strategy and organizational performance literature indicate that mediating variables can explain the mechanism linking strategy and performance outcomes (Fabrizi et al., 2024; Zhang et al., 2020), for example, strategy mediation under competitive pressure. However, these studies do not extend to the context of collaboration and regulation, creating a clear and relevant research gap. In other words, although many studies show that collaboration and regulation individually contribute to competitiveness, research integrating all three variables in a single framework and examining regulation as a mediator is still scarce in comprehensive empirical studies. Therefore, it is indicated that:

H4: Regulation effectively mediates the relationship between collaboration strategy and the competitiveness of legal products.

METHOD

This study employs a quantitative approach with an explanatory research design to examine the effect of collaboration strategy on the competitiveness of legal products, both directly and indirectly through regulation as a mediating variable (Sekaran & Bougie, 2017). The study sample consists of 155 respondents, comprising legal product resellers, selected using purposive sampling based on specific criteria, such as involvement in strategic decision-making and understanding of product legality aspects. The data were collected as primary data through a questionnaire using a five-point Likert scale. The collaboration strategy variable was measured using indicators of collaboration with influencers, media, certification bodies, and marketplaces. The regulation variable was measured through regulatory effectiveness, the

quality of judicial processes, protection of property rights, and certainty of justice, while competitiveness was measured through product standards, safety requirements, completeness of import documentation, and the impact of tariffs on selling prices. Data analysis was conducted using SEM-PLS to test the direct and indirect effects among variables (Hair et al., 2022), with significance tested at a 5% error level.

RESULT AND DISCUSSION

Based on data collected from 155 respondents, who are users of legal product materials and are considered to provide reliable information regarding the questionnaire distribution, the data analysis was conducted using the SEM-PLS approach, as illustrated in Figure 1. The SEM-PLS approach involves several procedural steps. First, the outer model analysis is performed, where the initial test examines convergent validity, assessed through factor loadings greater than 0.70. Based on the analysis results, indicators RG2 and RG3 were deemed invalid because their factor loadings were below 0.70. Consequently, the model was modified by removing these invalid indicators.

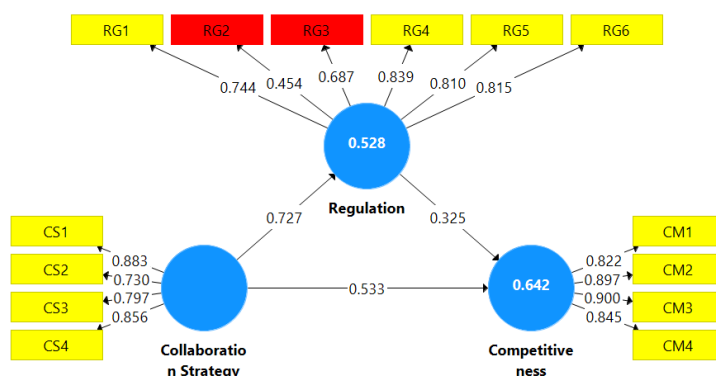


Figure 1. Outer Model Results
Source: SmartPLS Output

After modifying the model, as shown in Figure 2, all factor loadings for each variable were above 0.70. Similarly, reliability testing, assessed through AVE values, exceeded 0.50, and discriminant validity testing using HTMT values was below 0.90. This indicates that the indicators within the constructs are reliable, demonstrate consistent measurement, and the instrument exhibits adequate variance according to the recommended criteria (Hair et al., 2022). Meanwhile, the HTMT results suggest that, conceptually, there is no similarity between the instruments across different constructs.

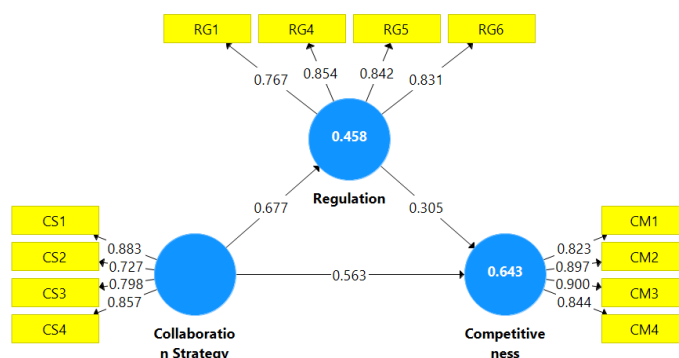
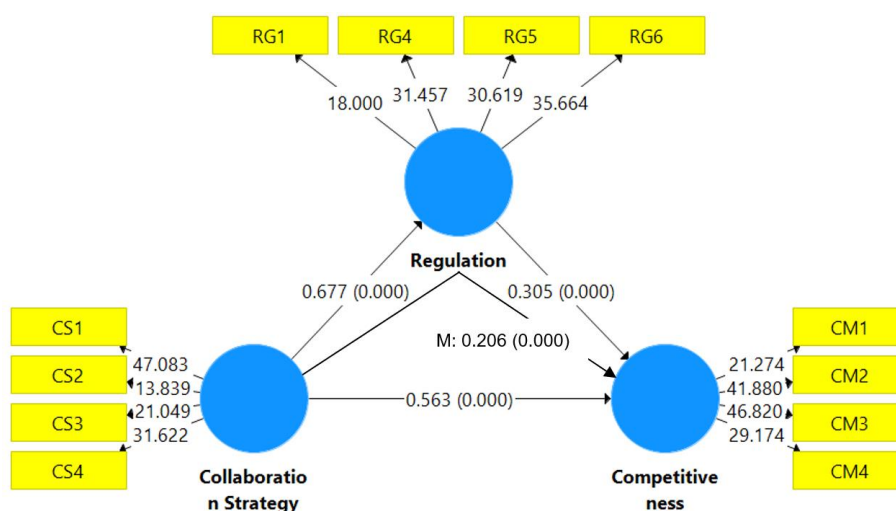


Figure 2. Outer Model Results (Modification)
Source: SmartPLS Output

Based on the modified model shown in Figure 2, the outer model meets the recommended criteria (Hair et al., 2022). Therefore, the analysis proceeds to the inner model, which is evaluated using VIF, R², and path coefficients ranging from -1 to +1, with a significance level of 95% (0.05). The inner model analysis results indicate that all VIF values are below 3, suggesting no multicollinearity. The R² values for regulation (0.458) and competitiveness (0.643) indicate that the exogenous variables have a moderate ability to explain the endogenous variables. Finally, the most important step is hypothesis testing using path coefficients, the results of which are presented in the following figure.



Information: M (Mediation)
Figure 3. Inner Model Results
 Source: SmartPLS Output

Based on the inner model results shown in Figure 3, all hypothesized models in this study are supported. The interpretation of each relationship between variables is as follows:

1. The path from collaboration strategy to regulation is positive and significant ($\beta = 0.677$, $p = 0.000 < 0.05$), **supporting H1.**
2. The path from collaboration strategy to competitiveness is positive and significant ($\beta = 0.563$, $p = 0.000 < 0.05$), **supporting H2.**
3. The path from regulation to competitiveness is positive and significant ($\beta = 0.305$, $p = 0.000 < 0.05$), **supporting H3.**
4. The mediating path of regulation between collaboration strategy and competitiveness is positive and significant ($\beta = 0.206$, $p = 0.000 < 0.05$), **supporting H4.**

Referring to the empirical model decision, a conceptual discussion of each relationship in this research model is thus outlined.

H1: Collaboration Strategy → Regulation (Supported)

Conceptually, this finding emphasizes that collaboration strategy is not merely about establishing relationships between parties, but serves as a strategic mechanism that strengthens compliance with legal requirements and the quality of legal products (Stell & Iwashita, 2024). In the context of legally sanctioned products, firms that actively engage in collaboration with regulators, industry actors, legal stakeholders, and strategic partners tend to have greater capacity to understand, adapt, and implement applicable regulatory standards, thereby reducing legal violation risks and enhancing product legitimacy in the eyes of consumers and the market.

Collaboration strategy plays a significant role in reinforcing legal products through its synergy with regulation. Partnerships with influencers and mass media increase public awareness of product legality, supporting regulatory effectiveness in suppressing the competitiveness of illegal products. Cooperation with MUI to tighten halal labeling requirements ensures compliance with official documentation, strengthens property rights protection, and improves the quality of justice processes. Meanwhile, collaboration with marketplaces enforces legal standards for digital products, minimizes the distribution of illegal products, and strengthens legal protection. Overall, the aspects of collaboration strategy enhance regulatory implementation, create a conducive market ecosystem for legal products, and positively and significantly increase legitimacy and legal compliance.

H2: Collaboration Strategy → Competitiveness (Supported)

Conceptually, this finding suggests that strategic collaboration not only improves inter-organizational coordination but also directly contributes to a legal product's ability to compete in the market. This aligns with the conceptual literature on cooperative strategy, which shows that collaboration between business units or organizations can expand resource access, improve operational efficiency, and support shared learning and innovation, thereby creating higher competitive value than isolated organizational efforts (Hamdan et al., 2025; Ibrahim et al., 2024).

Collaboration strategy enhances the competitiveness of legal products by strengthening standards, safety, and document compliance. Collaboration with influencers and mass media raises public awareness of product legality and safety, strengthening the position of legal products relative to illegal imports. Cooperation with MUI ensures complete documentation and halal certification, while collaboration with marketplaces enforces digital legal compliance, minimizing risks from price competition and illegal product distribution. Thus, strategic collaboration systematically strengthens the competitiveness of legal products through quality, compliance, and clear legitimacy.

H3: Regulation → Competitiveness (Supported)

Conceptually, regulation functions not only as a constraint but also as a driver of legal product competitiveness by providing legal certainty, quality standards, and consumer protection. This certainty encourages firms to improve quality, innovate, and enhance efficiency, making legal products more competitive in the market. These findings are consistent with recent studies showing that effective regulation can increase firm innovation and productivity while strengthening product competitiveness within complex legal and market contexts (Fabrizi et al., 2024; Tu & Shi, 2023).

Effective regulation enhances the competitiveness of legal products by limiting the dominance of illegal and non-compliant imported products. Regulatory effectiveness and high-quality judicial processes ensure legal compliance, maintaining product standards and safety requirements. Protection of property rights and judicial process quality guarantees complete documentation and legal certainty, enabling legal products to compete optimally against imports. Therefore, regulation systematically strengthens competitiveness through standards, safety, complete documentation, and legal certainty.

H4: Collaboration Strategy * Regulation → Competitiveness (Supported)

Conceptually, this finding confirms that collaboration strategy more effectively enhances the competitiveness of legal products when supported by a clear regulatory framework. Regulators act as mediators by providing legal certainty, quality standards, and implementation guidance, allowing strategic collaboration to translate into effective competitive advantage in the market. This is consistent with recent literature showing that

regulation and legal practices serve as critical channels in strengthening the impact of organizational strategy on performance and competitiveness (Fabrizi et al., 2024).

Collaboration strategy strengthens the competitiveness of legal products by enhancing legitimacy, document compliance, and public awareness through partnerships with influencers, media, MUI, and marketplaces. Effective regulation supports these efforts by enforcing product standards, safety, property rights, and legal certainty, giving legal products protection and competitive advantage over illegal or non-compliant imports. The synergy between strategic collaboration and regulation creates a conducive market ecosystem, where quality, safety, complete documentation, and legal compliance are key factors in enhancing the competitiveness of legal products.

CONCLUSION

Based on the conceptual analysis, collaboration strategy and regulation have a positive and significant effect on the competitiveness of legal products. Collaboration with influencers, media, MUI, and marketplaces enhances product legitimacy, document compliance, and consumer awareness, while effective regulation enforces product standards, safety requirements, property rights, and legal certainty. The synergy between these two factors creates a conducive market ecosystem, minimizes the circulation of illegal products, and strengthens the competitive position of legal products compared to imported or illegal alternatives.

From a managerial perspective, firms are advised to expand strategic collaboration with external actors, including influencers, media, certification authorities, and e-commerce platforms, to increase public education and legal compliance of products. Additionally, ensuring that all products meet standards, safety requirements, and complete legal documentation can enhance competitiveness and reduce legal risks. Coordination among marketing, legal, and compliance teams should also be strengthened so that strategic collaboration can optimally support regulatory implementation. However, the study is limited to legal products, so variations across industries or market scales have not been analyzed. Furthermore, external factors such as consumer behavior, economic conditions, and international policies were not considered, limiting the generalizability of the findings.

REFERENCES

- Ali, H., Karimi, S., & Febriamansyah, R. (2020). Analysis of export performance and export competitiveness trade of crude palm oil [CPO] industry in Indonesia with RSPO in India and United States markets. *IOP Conference Series: Earth and Environmental Science*, 497(1), 12043.
- Batory, A., & Svensson, S. (2020). Regulating Collaboration: The Legal Framework of Collaborative Governance in Ten European Countries. *International Journal of Public Administration*, 43(9), 780–789. <https://doi.org/10.1080/01900692.2019.1658771>
- Fabrizi, A., Gentile, M., Guarini, G., & Meliciani, V. (2024). The impact of environmental regulation on innovation and international competitiveness. *Journal of Evolutionary Economics*, 34(1), 169–204. <https://doi.org/10.1007/s00191-024-00852-y>
- Hair, J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*.
- Hamdan, H., Krisnahadi, T., Komaria, N., Ilhamalimy, R. R., Raharja, I., & others. (2025). Institutional Innovation Performance of Tourism Villages: What Factors Are Needed? *Jurnal Kepariwisata Indonesia: Jurnal Penelitian Dan Pengembangan Kepariwisata Indonesia*, 19(1), 153–176.

- Hamdan, H., Yuliantini, T., Raharja, I., Samudro, A., & Ali, H. (2023). Establishing collaboration and knowledge sharing as a fear of missing out response in improving tourist travel agency innovation performance. *BISMA (Bisnis Dan Manajemen)*, 115–143.
- Ibrahim, A. A., Ahmad, S. Z., & Abu Bakar, A. R. (2024). Impact of competitive intelligence on firm sustainable competitiveness and performance: strategic design collaboration's mediating role. *Management Research Review*, 48(2), 231–257. <https://doi.org/10.1108/MRR-04-2024-0280>
- Ibrahim, A. M., & Ali, H. (2023). Entrepreneurial orientation and innovation on competitive advantage. *Siber International Journal of Digital Business (SIJDB)*, 1(1), 41–49.
- Indra, R., & Hamdan, H. (2024). Trust as a Mediator between Export Commitment and Competitive Advantage on Export SME Performance. *Dinasti International Journal of Management Science (DIJMS)*, 6(2).
- Owusu Kwateng, K., Tetteh, F. K., Atchulo, H. Ben, & Opoku-Mensah, S. (2022). Effect of corporate environmental strategies on firms' competitiveness, the mediating role of supply chain collaboration. *Journal of Global Responsibility*, 13(3), 299–316. <https://doi.org/10.1108/JGR-02-2021-0026>
- Saputra, G. A., Ali, H., & Hendayana, Y. (2024). The Influence of Product Orientation and Product Innovation on Competitive Advantage. *Greenation International Journal of Tourism and Management*, 2(2), 92–98.
- Sari, R. A., & Ali, H. (2024). Implementation of SWOT Analysis to Increase Competitiveness of Online Stores in the Marketplace. *Siber International Journal of Sport Education*, 2(2), 72–78.
- Sekaran, U., & Bougie, R. (2017). *Metode Penelitian untuk Bisnis: Pendekatan Pengembangan Keahlian* (6th, book 2 ed.). Salemba Empat: Jakarta.
- Siahaan, C., Samosir, O., & Ali, H. (2020). Exploring mediating role of green supply chain management between political support by government, green knowledge management capability and sustainable competitive advantage. *International of Journal of Supply Chain Management*, 9(5), 1498–1506.
- Simorangkir, N. Z., & Ali, H. (2025). SWOT, IFAS, EFAS, and SPACE Analysis of Competitive Advantage Enhancement Strategies for XYZ Bakery and Pastry UMKM in Facing Market Competition. *Siber International Journal of Education Technology (SIJET)*, 2(4), 116–124.
- Stell, A., & Iwashita, N. (2024). Enhancing collaboration: Exploring regulated learning strategies in the co-regulatory processes of collaborative L2 writing. *System*, 125, 103410. <https://doi.org/https://doi.org/10.1016/j.system.2024.103410>
- Susiang, M. I. N., Siswanti, I., Permana, D., & Wibowo, M. W. (2024). Effects of competitive intelligence and halal integrity on Halalan Tayyiban implementation strategy in Indonesian MSMEs: the mediating role of halal orientation strategy. *Journal of Islamic Marketing*. <https://doi.org/10.1108/JIMA-10-2023-0344>
- Talias, M. (2021). *Collaborative Regulation: Collaborative Governance in Regulation BT - Collaborative Governance: Theory and Lessons from Israel* (N. Sher-Hadar, L. Lahat, & I. Galnoor (eds.); pp. 165–189). Springer International Publishing. https://doi.org/10.1007/978-3-030-45807-2_8
- Tu, W., & Shi, R. (2023). Influence of Environmental Regulation on the International

Competitiveness of the High-Tech Industry: Evidence from China. In *Sustainability* (Vol. 15, Issue 1, p. 677). <https://doi.org/10.3390/su15010677>

Wiranti, Z., & Ali, H. (2025). Swot analysis and so, st, wo and wt strategies in optimizing marketing strategies for competitive advantage at xyz fashion stores. *Greenation International Journal of Engineering Science*, 3(1), 10–22.

Zhang, N., Deng, J., Ahmad, F., & Draz, M. U. (2020). Local Government Competition and Regional Green Development in China: The Mediating Role of Environmental Regulation. In *International Journal of Environmental Research and Public Health* (Vol. 17, Issue 10, p. 3485). <https://doi.org/10.3390/ijerph17103485>