



Enhancing employability: Merdeka campus policy and facilities mediated by industrial collaboration

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ABSTRACT

This study examines how the effectiveness of the Merdeka Campus policy and the quality of university service facilities contribute to student employability, with industrial collaboration positioned as a mediating mechanism. Drawing on the Resource-Based View (RBV), the research conceptualizes institutional policies and facilities as strategic resources that can generate competitive advantages for graduates when effectively aligned with external partnerships. A quantitative design was adopted, using purposive sampling to collect data from 311 final-year students and recent graduates in the Greater Jakarta area. The data were analyzed through Covariance-Based Structural Equation Modeling (CB-SEM). The results indicate that both the effective implementation of the Merdeka Campus policy and the adequacy of service facilities significantly strengthen industrial collaboration. In turn, industrial collaboration plays a pivotal mediating role, substantially enhancing the positive effect of university resources on student employability. These findings suggest that institutional resources alone are insufficient; their impact is maximized when integrated with meaningful industry engagement. The study therefore underscores the importance for higher education institutions to align flexible academic policies and supportive infrastructure with sustained industry partnerships in order to better address labor market demands and narrow the gap between graduate competencies and employer expectations.

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1. INTRODUCTION

In the era of Industry 4.0, higher education institutions are increasingly expected to demonstrate their tangible contribution to economic development. Universities are no longer assessed solely on academic reputation or research output; rather, their ability to produce graduates who are ready to thrive in a rapidly evolving labor market has become a central benchmark of institutional performance. Across many countries, aligning educational outcomes with industry needs has therefore emerged as a strategic priority.

In Indonesia, this challenge has been addressed through the introduction of the Merdeka Belajar Kampus Merdeka (MBKM) policy, which seeks to narrow the persistent gap between graduate competencies and market expectations (Abdullah et al., 2023; Adri et al., 2023; Anggara, 2023; Asmadi et al., 2023; Meke et al., 2022; Mursitama et al., 2022; Putri & Bustomi, 2025; Sa'diyah et al., 2022; Tutty Rokhayari Rosa et al., 2021).

The MBKM policy represents a significant regulatory shift. It encourages universities to move away from rigid, discipline-bound curricula toward more flexible and experiential learning ecosystems. By granting students the right to study outside their primary program—through internships, industry projects, or community engagement—the policy aims to strengthen the connection between academic knowledge and real-world application. This transformation reflects a broader recognition that contemporary graduates must possess not only theoretical understanding but also adaptability, problem-solving capacity, and professional agility to navigate an increasingly volatile job market.

Yet policy reform alone does not guarantee meaningful outcomes. A curriculum may formally allow off-campus learning, but without a supportive institutional ecosystem, such flexibility risks remaining symbolic. Empirical observations suggest that while many universities have adopted MBKM administratively, its practical implementation is often constrained by limited infrastructure and service readiness. Research indicates that institutional reputation and student satisfaction are strongly influenced by the quality of physical and service environments, which in turn affect broader institutional performance (Wilkins et al., 2022). In this sense, infrastructure is not peripheral—it is foundational.

Adequate service facilities, including advanced laboratories, integrated digital platforms, simulation tools, and reliable information systems, are essential to transforming industrial collaboration from a procedural arrangement into a substantive partnership. Without these resources, collaboration risks becoming transactional rather than developmental. Moreover, in a globalized labor market, universities must prepare students not only for local employment but also for international competitiveness. This requires structured preparation before internships or apprenticeships. As argued by Saidani (Saidani et al., 2022) Internships do not automatically enhance employability; they must be embedded within a well-prepared learning environment where students can meaningfully apply and refine their technical and professional skills. Without such preparation, the potential of collaboration to produce “work-ready” graduates remains unrealized.

Building on this concern, the present study conceptualizes student employability as the systemic output of what may be termed an institutional “supply chain.” Similar to a high-performing production system that depends on both high-quality inputs and effective processing mechanisms, universities require both intangible and tangible resources to generate employable graduates.

Conceptually, it is critical to distinguish between the direct and indirect influences of the Merdeka Campus policy within this supply chain. The direct influence provides the internal academic opportunity for flexible, cross-disciplinary learning, primarily building cognitive knowledge within the university sphere. In contrast, the indirect influence—mediated by industrial collaboration—represents the vital conversion of this theoretical flexibility into market value. While the campus policy grants the opportunity for off-campus learning, an active industry partnership provides the necessary context. It is through this indirect pathway that students acquire the tacit knowledge, professional networks, and real-world problem-solving skills that directly drive employability.

First, intangible resources are represented by the effectiveness of the Merdeka Campus policy (X1). This dimension reflects the university’s strategic agility, administrative flexibility, and commitment to student-centered learning. These elements

function as institutional “software,” enabling curricular adaptation in response to changing industry demands. Second, tangible resources are represented by service facilities (X2), encompassing the physical and digital infrastructure that supports educational processes. These facilities constitute the institutional “hardware,” providing the operational platform for experiential and immersive learning.

However, this study argues that these resources do not directly translate into employability outcomes. Their impact is mediated by industrial collaboration (Z). Industry partners, as rational organizations, are more inclined to engage deeply with universities that demonstrate both policy flexibility and technological readiness. Well-equipped institutions reduce transaction costs, facilitate advanced apprenticeships, and create environments conducive to innovation and joint problem-solving. In this framework, industrial collaboration functions as the transformative mechanism that converts institutional resources into labor-market-relevant competencies. Through mentorship, real-world projects, and practitioner involvement, collaboration bridges the space between academic preparation and professional performance.

The theoretical foundation of this study is grounded in the Resource-Based View (RBV) of the firm, as articulated by Jay Barney (Barney, 1991). RBV posits that sustained competitive advantage arises from resources that are valuable, rare, inimitable, and non-substitutable (VRIN). When applied to higher education, competitive advantage may be understood as a university’s capacity to consistently produce highly employable graduates, thereby attracting students, funding, and strategic partnerships. In the post-pandemic and VUCA (Volatility, Uncertainty, Complexity, Ambiguity) context, scholars emphasize that institutions must not only possess resources but also mobilize them dynamically to respond to uncertainty (Susanto & Wibowo, 2024).

Accordingly, this study extends traditional RBV applications by incorporating boundary-spanning and dynamic elements. Merdeka Campus effectiveness (X1) is conceptualized as an organizational capability—an intangible resource that enables academic reconfiguration in response to external change. Service facilities (X2) are conceptualized as physical capital resources that enhance learning efficiency and support immersive pedagogies. Prior research on educational technology ventures in Indonesia underscores that competitive strength emerges from the interaction between physical infrastructure and human capability (Aripradono, 2022). Meanwhile, industrial collaboration (Z) is positioned as a relational resource or dynamic capability, drawing on the perspective of David Teece (Teece, 2018), who emphasizes the importance of integrating and reconfiguring internal and external competencies in rapidly changing environments. Through collaboration, universities access industry knowledge and transfer it effectively to students. Recent studies on private higher education institutions indicate that such market orientation and innovation are key drivers of competitive advantage, suggesting that universities must actively adapt to industry needs through these partnerships rather than remaining static (Yulianti & Ferry Bakti, 2025).

Within this framework, the Merdeka Campus policy also serves as a strategic signal to industry. By enabling flexible learning pathways and reducing bureaucratic rigidity, universities demonstrate openness to partnership and practical engagement. Project-based learning initiatives aligned with industry Key Performance Indicators (KPIs) exemplify how academic outputs can directly correspond to organizational needs. Empirical evidence suggests that MBKM enhances work competencies when implemented through structured and well-supported mechanisms that facilitate external integration (Syahmiarni & Ilmi, 2025).

H1: Merdeka Campus Effectiveness (X1) positively and significantly influences Industrial Collaboration (Z). Similarly, in a digitally driven economy, collaboration quality depends heavily on technological compatibility. Industry partners expect students to possess familiarity with contemporary tools and systems. Universities lacking adequate facilities may impose additional training burdens on firms, thereby discouraging

partnership. Conversely, institutions equipped with advanced laboratories and collaborative spaces signal readiness and credibility. Studies indicate that industry-integrated project-based learning requires robust curricular and infrastructural support to effectively enhance student preparedness (Naseer et al., 2025).

H2: Services Facilities (X2) positively and significantly influence Industrial Collaboration (Z). Student employability (Y) is widely defined as a combination of skills, knowledge, and personal attributes that increase graduates' likelihood of gaining and sustaining employment (Yorke & Knight, 2004). While classroom learning builds cognitive foundations, tacit knowledge—such as professional judgment and workplace norms—is most effectively acquired through direct industry exposure. Industrial collaboration provides this immersive environment, facilitating the transition from theoretical understanding to applied competence. Empirical findings demonstrate that industry-enriched learning significantly strengthens workforce readiness and specific skill development (Naseer et al., 2025; Wang et al., 2022).

H3: Industrial Collaboration (Z) positively and significantly influences Student Employability (Y). Finally, this study proposes that policy effectiveness and service facilities constitute necessary but insufficient conditions for employability enhancement. Industrial collaboration operates as the critical mediating mechanism that converts institutional inputs into market-relevant outcomes. This mediating logic parallels findings in organizational research, indicating that relational mechanisms often bridge internal commitments and performance outcomes (Iryanty & Rachmawaty, 2025).

H4: Industrial Collaboration (Z) mediates the relationship between Merdeka Campus Effectiveness (X1), Services Facilities (X2), and Student Employability (Y). By integrating policy reform, infrastructural capacity, and partnership dynamics into a unified structural model, this study moves beyond fragmented analyses that examine these factors in isolation. It offers a holistic perspective on the systemic determinants of student employability and provides strategic insight for university leaders and policymakers. Rather than relying on piecemeal interventions, enhancing graduate employability requires coordinated investment in flexible academic governance, modern infrastructure, and sustained, meaningful industry engagement.

2. RESEARCH METHOD



Figure 1. Conceptual Framework

The conceptual model developed in this study positions Merdeka Campus Effectiveness (X1) and Services Facilities (X2) as key antecedent variables that shape the quality of Industrial Collaboration (Z). In turn, industrial collaboration operates as a mediating mechanism that enhances Student Employability (Y). In essence, the model assumes that institutional resources—both policy-related and infrastructural—do not directly translate into employability outcomes. Rather, their influence is channeled through the strength and depth of university–industry partnerships.

This research adopts a quantitative approach with both descriptive and causal elements. The descriptive component provides an overview of how the Merdeka Campus policy is implemented and how students perceive the adequacy of university facilities. Meanwhile, the causal component examines the structural relationships among the variables and tests the proposed hypotheses.

To assess these relationships comprehensively, Structural Equation Modeling (SEM) was employed. This method allows for simultaneous examination of direct and indirect effects, making it particularly suitable for testing the mediating role of Industrial Collaboration in the relationship between institutional resources and student employability.

The population of this study consists of final-year students and recent graduates in the Greater Jakarta area who have participated in the Merdeka Belajar Kampus Merdeka (MBKM) program. These individuals were selected because they have direct exposure to off-campus learning experiences, such as internships and industry-based projects, which are central to the research model.

A non-probability purposive sampling technique was used to ensure that respondents met specific criteria: (a) They were active students or alumni. (b) They had participated in off-campus internships or industrial collaboration activities under the MBKM framework.

A total of 311 respondents were included in the final dataset. This number satisfies the recommended sample size for SEM analysis, which typically requires 5–10 times the number of indicators (Hair et al., 2022). Given that the study employs 35 indicators in total, the minimum required sample size was 175. Therefore, a sample of 311 respondents provides sufficient statistical power and supports robust model estimation.

Data were collected through a structured questionnaire using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The instrument was designed to capture perceptions across four main constructs: (a) Merdeka Campus Effectiveness (X1) was measured using eight indicators reflecting learning flexibility, policy implementation clarity, and integration of project-based activities. (b) To ensure robust measurement, Service Facilities (X2) were evaluated using 8 specific survey items that capture both the physical and digital dimensions of the educational servicescape. These 8 items were derived from four primary conceptual dimensions: (1) the modernity of physical simulation laboratories mirroring industry standards; (2) the reliability and integration of campus e-learning information systems; (3) the adequacy of collaborative workspaces for project-based learning; and (4) the accessibility of comprehensive digital library resources for advanced research. Each conceptual dimension was measured using distinct questionnaire items assessed on a 5-point Likert scale, ensuring a comprehensive evaluation of the facility's quality. (c) Industrial Collaboration (Z) was operationalized using eight indicators related to mentorship quality, real-world exposure, and practical skill development. (d) Student Employability (Y) was measured using eleven indicators focusing on professional competencies, adaptability, confidence, and alignment with industry expectations.

The data were analyzed using Covariance-Based Structural Equation Modeling (CB-SEM). The analysis was conducted in two primary stages. First, the measurement model (outer model) was evaluated through Confirmatory Factor Analysis (CFA). This stage assessed the validity and reliability of the constructs. Convergent validity was examined through factor loadings (≥ 0.50), while reliability was assessed using Cronbach's Alpha and Composite Reliability coefficients (≥ 0.70). Discriminant validity was also evaluated to ensure that each construct was empirically distinct. Second, the structural model (inner model) was assessed to test the hypothesized relationships among variables. Model fit indices were examined to confirm the adequacy of the overall model. Hypothesis testing was conducted by evaluating the significance of path coefficients, where a hypothesis was accepted if the Critical Ratio (C.R.) was ≥ 1.96 and the p-value was ≤ 0.05 .

To examine the mediating role of Industrial Collaboration, standardized indirect effects were calculated using bootstrapping procedures. This approach provides a rigorous assessment of mediation by estimating the stability and significance of indirect

paths within the structural model. Through this systematic analytical process, the study ensures that both the measurement properties of the constructs and the structural relationships among them are empirically validated, thereby strengthening the credibility and explanatory power of the proposed model.

3. RESULTS AND DISCUSSION

Before testing the structural relationships, the measurement model was carefully assessed to ensure the research instrument demonstrated adequate validity and reliability. This step is essential in Structural Equation Modeling (SEM), as meaningful structural interpretation depends on the soundness of the measurement properties.

Table 1. Construct Validity and Reliability

Variable	Number of Indicators	Factor Loading Range (λ)	Cronbach's Alpha	Composite Reliability (CR)	AVE	Conclusion
Merdeka Campus (X1)	8	0.765 – 0.845	0.864	0.868	0.452	Valid & Reliable
Services Facilities (X2)	8	0.810 – 0.890	0.891	0.893	0.512	Valid & Reliable
Industrial Collab (Z)	8	0.795 – 0.860	0.885	0.885	0.499	Valid & Reliable
Employability (Y)	11	0.840 – 0.910	0.914	0.914	0.496	Valid & Reliable

The results of construct validity and reliability testing (see Table 4.1) indicate strong internal consistency across all variables. Composite Reliability (CR) and Cronbach’s Alpha values exceed the recommended threshold of 0.70, with all constructs reporting values above 0.86. These findings confirm that the indicators consistently measure their respective latent variables.

Although the Average Variance Extracted (AVE) for several constructs is slightly below the conventional benchmark of 0.50, the Composite Reliability values are well above 0.60. According to the criteria proposed by Fornell and Larcker, convergent validity can still be considered acceptable under such conditions, particularly when reliability is strong. Overall, the measurement model demonstrates adequate psychometric properties and is suitable for subsequent structural analysis.

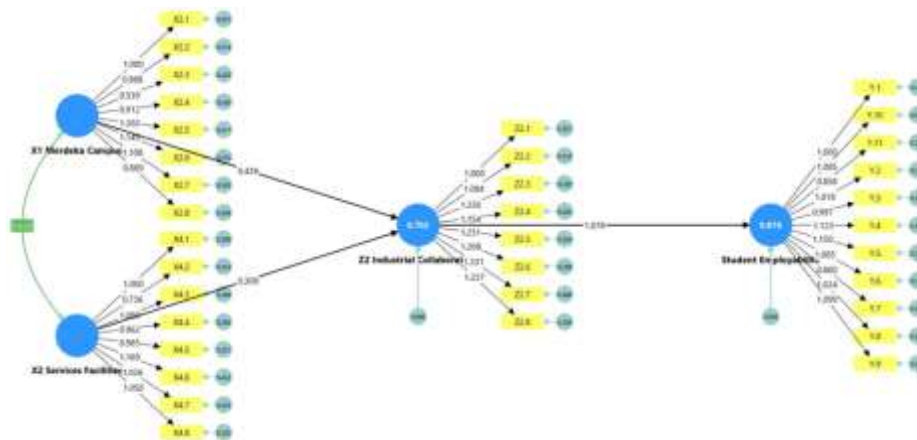


Figure 2. Full Structural Model (Standardized Estimates)

Following validation of the measurement model, the structural model was examined to test the hypothesized relationships among variables. The full structural output is illustrated in Figure 2.

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The model's predictive capability was evaluated using R^2 values. The results indicate that the model explains 70.2% of the variance in Industrial Collaboration ($R^2 = 0.702$) and 81.6% of the variance in Student Employability ($R^2 = 0.816$). These values suggest substantial explanatory power, indicating that the proposed antecedents account for a large proportion of variation in the endogenous constructs.

Table 2. Coefficient of Determination (R^2) Results

Dependent Variable	R-Square (R^2)	Interpretation
Industrial Collaboration (Z)	0,702	Strong (70.2% variance explained)
Student Employability (Y)	0,816	Very Strong (81.6% variance explained)

Hypothesis testing was conducted by analyzing path coefficients, T-values (Critical Ratios), and P-values. A relationship was considered statistically significant when the T-value exceeded 1.96, and the P-value was below 0.05.

Table 3. Path Coefficients and Hypothesis Testing

Hypothesis	Relationship	Estimate (β)	S.E.	T-Value (C.R.)	P-Value	Conclusion
H1	Merdeka Campus (X1) → Ind. Collab (Z)	0.439	0.062	7.034	0.000 (***)	Supported / Accepted
H2	Services Facilities (X2) → Ind. Collab (Z)	0.38	0.054	5.698	0.000 (***)	Supported / Accepted
H3	Ind. Collab (Z) → Student Employability (Y)	1.078	0,108	9.945	0.000 (***)	Supported / Accepted

While the empirical results demonstrate a significant positive effect of the Merdeka Campus policy (X1), its real-world effectiveness is highly contingent on several contextual factors. The impact of this policy is significantly strengthened by a university's geographical proximity to industrial hubs, leadership commitment to bureaucratic agility, and the pedagogical adaptability of its faculty. Conversely, the policy's effectiveness in fostering collaboration is often weakened by rigid internal administrative barriers—such as inflexible credit-transfer mechanisms—and a lack of pre-existing corporate alumni networks. Consequently, the statistical strength observed for this variable reflects not merely the administrative adoption of the policy but the institution's successful management of these contextual enablers and barriers.

The study proves that service facilities significantly drive industrial collaboration. This supports the findings of Wilkins (Wilkins et al., 2022), suggesting that the physical and digital environment is crucial for educational engagement. Industry partners are more willing to deploy mentors to technologically ready campuses.

Table 4. Indirect Effects (Mediation Analysis)

Mediation Path	Indirect Effect	Result	Conclusion
H4a	Merdeka Campus (X1) → Ind. Collab (Z) → Student Employability (Y)	0.473	Significant Mediation
H4b	Services Facilities (X2) → Ind. Collab (Z) → Student Employability (Y)	0.332	Significant Mediation

The results confirm that industrial collaboration mediates the relationship between university resources and employability. This aligns with the RBV theory (Barney,

1991), where resources (Policy and Facilities) must be organized and utilized through partnerships to generate value (Employability). This also supports the view that student attitudes toward career services and internships are vital for success (Wang et al., 2022).

The discussion interprets the statistical findings within the context of the Extended Resource-Based View (RBV) and compares them with the newly integrated empirical studies.

The findings confirm that Merdeka Campus Effectiveness (X1) significantly influences Industrial Collaboration (Z) ($\beta = 0.439$, $p < 0.001$). This result suggests that when universities effectively implement flexible learning systems—such as facilitating credit transfer for off-campus activities and integrating project-based learning—industry partners are more inclined to engage.

This finding is consistent with prior research demonstrating that the MBKM curriculum enhances students' communication and problem-solving abilities by broadening access to professional environments (Putu et al., 2023). It also aligns with evidence from Syahmiarni and Ilmi (Syahmiarni & Ilmi, 2025), who reported that MBKM strengthens work competencies when implemented through structured and well-supported mechanisms.

From a theoretical perspective, this outcome supports the Dynamic Capabilities argument advanced by David Teece (Teece, 2018), which emphasizes the importance of organizational agility in responding to environmental change. Universities that demonstrate flexibility and administrative adaptability signal readiness to external stakeholders. By reducing bureaucratic barriers, they enhance their attractiveness as collaborative partners.

The analysis further reveals that Services Facilities (X2) significantly influence Industrial Collaboration (Z) ($\beta = 0.308$, $p < 0.001$). This finding reinforces the concept of the “educational servicescape” proposed by Wilkins (Wilkins et al., 2022), which highlights the importance of physical and digital environments in shaping engagement and institutional credibility.

Industry partners, as rational actors, prefer institutions equipped with modern laboratories, reliable digital infrastructure, and technologically compatible systems. Facilities thus function not merely as passive assets but as tangible signals of institutional readiness. They reduce training costs, facilitate advanced apprenticeships, and build trust.

This result is also consistent with Naseer (Naseer et al., 2025), who argue that industry-integrated project-based learning requires strong curricular and infrastructural support to effectively enhance workforce readiness. In this sense, infrastructure strengthens the feasibility and depth of collaboration.

Industrial Collaboration (Z) emerges as the strongest determinant of Student Employability (Y) ($\beta = 1.078$, $p < 0.001$). This substantial coefficient underscores the centrality of experiential learning in shaping labor market outcomes.

The finding aligns with empirical evidence from Saidani (Saidani et al., 2022), who demonstrated—using predictive modeling techniques—that structured internships significantly increase employment prospects. Their work highlights that supervision quality and task complexity are decisive factors. The present study reinforces this conclusion by showing that collaboration acts as the mechanism through which academic preparation is transformed into market-relevant competence.

Similarly, Naseer (Naseer et al., 2025) found that industry-enriched project-based learning enhances future readiness, while Bèda and Mohamed Kaosar (Bèda & Kaosar, 2025) emphasize the necessity of exposure to professional and cross-cultural environments to cultivate adaptability. Together, these studies support the argument that employability is rooted not only in knowledge acquisition but in immersion within authentic professional contexts. Employers value tacit knowledge, workplace norms, and

applied competencies—attributes developed through collaboration rather than classroom instruction alone.

The mediation analysis confirms that Industrial Collaboration fully mediates the relationship between university resources and employability (Total Indirect Effect = 0.805). In practical terms, policy effectiveness (X1) and service facilities (X2) do not directly produce employment outcomes. Instead, they create the structural and institutional conditions necessary for meaningful collaboration.

This finding is consistent with the Resource-Based View articulated by Jay Barney (Barney, 1991), which posits that resources generate value only when effectively organized and deployed. Within this framework, policy and infrastructure represent valuable internal resources, but their market value is realized only through relational mechanisms.

The mediation mechanism observed here parallels findings in organizational research. Iryanty and Rachmawaty (Iryanty & Rachmawaty, 2025) demonstrate that industrial relations mediate the relationship between corporate commitment and performance. Similarly, in the higher education context, institutional commitment—expressed through policy reform and infrastructure investment—must be channeled through active partnerships to achieve employability outcomes.

In essence, the university provides the inputs: intangible resources (policy effectiveness) and tangible resources (facilities). Industry, through collaboration, provides the transformation process. Without this mediating interaction, institutional improvements remain internally beneficial but externally underutilized.

Overall, the model validates the central premise that Industrial Collaboration serves as the vital bridge between institutional capacity and labor market success. Policy flexibility and infrastructural strength are necessary foundations, yet value creation occurs at the intersection between academia and industry.

The findings, therefore, extend the Resource-Based View by emphasizing that in higher education, competitive advantage—in the form of graduate employability—emerges not only from internal resources but from the university's ability to activate those resources through sustained, high-quality partnerships.

4. CONCLUSION

Drawing on the results of the hypothesis testing and subsequent analysis, several important conclusions can be articulated. First, the effectiveness of the Merdeka Campus policy (X1) plays a significant role in strengthening industrial collaboration. The findings demonstrate that curricular flexibility—particularly the recognition of off-campus learning, cross-disciplinary engagement, and credit transfer mechanisms—functions as a strong institutional signal to industry partners. When universities demonstrate regulatory openness and academic adaptability, industry actors are more willing to initiate and sustain partnerships. In this sense, policy effectiveness is not merely an internal governance matter; it becomes a strategic bridge between academia and industry.

Second, service facilities (X2) emerge as a fundamental prerequisite for meaningful collaboration. The empirical results confirm that industry partners are more inclined to engage with institutions that possess adequate physical and digital infrastructure, including well-equipped laboratories, simulation environments, and reliable information systems. Facilities provide tangible assurance of student readiness and institutional professionalism. Without this infrastructural foundation, collaboration risks remaining superficial or limited in scope.

Third, industrial collaboration (Z) proves to be the most powerful direct determinant of student employability (Y). Students who participate in structured industry engagement—through mentorship, applied projects, and real-world problem solving—

demonstrate higher levels of job readiness compared to those who rely exclusively on classroom-based instruction. This reinforces the argument that employability is not formed solely through theoretical knowledge, but through experiential learning and professional socialization.

Finally, the mediating role of industrial collaboration is central. The analysis confirms that collaboration fully mediates the relationship between university resources (policy effectiveness and facilities) and student employability. In practical terms, neither flexible policy nor modern infrastructure automatically produces employable graduates. These institutional resources generate impact only when they are actively translated into sustained and functional partnerships with industry. Collaboration thus operates as the conversion mechanism that transforms institutional capacity into labor market outcomes.

The findings of this study offer several strategic implications for university leaders and policymakers. First, universities must reposition the Merdeka Campus initiative from a compliance-oriented programme to a strategic engagement instrument. Rather than treating the policy as a regulatory obligation, institutions should leverage it to attract high-quality industry partners. Clear communication of curricular flexibility and partnership readiness can strengthen institutional credibility in the eyes of prospective collaborators. Second, investment in service facilities should be guided by considerations of industrial relevance rather than solely student convenience. Laboratories, digital platforms, and collaborative spaces must reflect current industry standards to ensure compatibility. When facilities mirror professional environments, they reduce onboarding costs for partners and increase the attractiveness of collaboration. Third, curriculum development should move toward genuine co-creation with industry practitioners. Given that industrial collaboration exerts the strongest influence on employability, practitioners should be engaged not only as guest lecturers but also as active contributors to curriculum design, project supervision, and competency assessment. Such integrative approaches help ensure that learning outcomes align with evolving market expectations.

To strengthen industry partnerships as mediators of employability, specific policy actions are required. Institutionally, universities should establish dedicated University-Industry Liaison Offices to streamline Memorandums of Understanding (MoUs) and accurately match student competencies with corporate needs. Academically, partnerships must evolve from passive internships to active curriculum co-creation, formally integrating industry practitioners into syllabus design and competency assessment. At the macro-level, the government should formulate incentive structures, such as tax deductions or corporate social responsibility (CSR) recognition, for companies that actively host and mentor students.

This study is subject to several limitations that should be acknowledged. First, the geographical scope is confined primarily to the Greater Jakarta and Banten regions, where industrial concentration is relatively high. The dynamics of collaboration and employability may differ in provinces with fewer industrial clusters or limited corporate presence. Second, the research adopts a cross-sectional design, capturing perceptions and outcomes at a single point in time. While this approach provides valuable insights into structural relationships, it does not fully capture the long-term trajectory of graduate career development. Longitudinal studies following graduates over one to two years after completion would yield richer evidence regarding sustained employability and career progression.

Future studies may extend this model by incorporating moderating variables that reflect emerging competencies and institutional dynamics. For instance, digital literacy among students may strengthen the relationship between service facilities and industrial collaboration, particularly in technology-intensive sectors. Similarly, lecturer agility—defined as the ability of academic staff to adapt pedagogy and content to industry developments—may amplify the effectiveness of policy implementation. Additionally,

comparative research between STEM (Science, Technology, Engineering, and Mathematics) programs and Social Science disciplines would provide a nuanced understanding of resource dependency. The importance of service facilities may vary considerably across fields, suggesting that employability strategies should be discipline-sensitive rather than uniform. Overall, this study underscores that enhancing student employability requires a systemic and integrated approach. Sustainable impact emerges not from isolated reforms, but from the deliberate alignment of flexible policy, robust infrastructure, and deep industrial engagement.

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