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ARTICLE

Government, University, and Private-Sector Collaboration in Madagascar's Higher Education Reform: Case of University of Toliara

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Abstract
This study explores the roles of government, universities, and the private sector in the implementation of higher education reform in Madagascar, with particular attention to the nature of their collaboration and the challenges that shape it. Using a qualitative case-study approach, data were collected at the University of Toliara through in-depth interviews with 15 key informants consisting of government officials, university administrators and academic staff, and private-sector representatives, complemented by field observations. Thematic analysis was employed to identify patterns related to stakeholder roles, institutional responses, and collaborative practices. The findings reveal that higher education reform in Madagascar continues to be predominantly state-driven, with government institutions exercising substantial influence through regulatory frameworks and policy directives. Universities have sought to adapt to these reforms by revising curricula and strengthening internal coordination; however, persistent constraints related to funding, infrastructure, and research capacity have limited their ability to implement change effectively. Private-sector involvement has primarily focused on graduate employability through internships, recruitment activities, and occasional feedback on workforce needs, yet these relationships remain largely informal and insufficiently embedded within institutional structures. Fragmented communication, uneven institutional capacities, and the absence of formal coordination mechanisms further hinder collaborative reform efforts. This study contributes empirical evidence from Madagascar, a context that remains underrepresented in the literature on higher education reform and collaborative governance. The findings suggest that collaborative arrangements in resource-constrained environments are shaped by asymmetries in institutional capacity and influence, resulting in partnerships that differ from idealized models of stakeholder cooperation. Strengthening institutional support, establishing formal coordination platforms, and fostering sustained engagement among stakeholders are therefore essential to improving the effectiveness and sustainability of higher education reform in developing-country contexts.

Keywords: Government; Higher Education; Madagascar; Private Sector; Reform.

1. Introduction

Higher education has become increasingly central to national development agendas across the world. Beyond its traditional functions of teaching and knowledge transmission, the sector is now expected to contribute to economic competitiveness, social mobility, innovation, and the production of human capital capable of responding to rapidly changing societal demands [1] [2] [3]. These expanded expectations have intensified calls for reform, particularly in countries seeking to strengthen the relevance and quality of their higher education systems. Governments are required to establish regulatory frameworks that ensure accountability while preserving institutional autonomy, universities are expected to enhance their educational and research capacities, and private-sector actors are increasingly encouraged to participate in shaping graduates' competencies and supporting innovation processes [4]. As a result, higher education reform can no longer be understood solely as an internal institutional matter or a government-led initiative. Rather, it has evolved into a complex process involving multiple stakeholders whose interests, capacities, and expectations intersect.

The growing emphasis on collaboration reflects broader changes in the governance of higher education. Reform initiatives around the world have increasingly focused on issues such as quality assurance, funding diversification, accountability, and responsiveness to labor-market demands [5] [6] [7]. In Europe and Asia, reforms have often involved changes in financing mechanisms, national qualification frameworks, and performance evaluation systems designed to improve efficiency and institutional outcomes [8] [9] [10]. However, the conditions under which reforms are implemented vary considerably across contexts. In many African countries, efforts to expand access and improve quality have unfolded alongside persistent structural constraints, including limited public expenditure, rapid demographic growth, political instability, and continuing mismatches between graduate competencies and labor-market needs [11] [12]. These realities complicate the implementation of reform agendas and raise important questions about how different actors share responsibilities and negotiate competing priorities.

Existing studies have provided valuable insights into specific dimensions of higher education reform. A substantial body of scholarship has examined how governments use regulation, accreditation, and funding mechanisms to steer institutional change and enhance accountability [13] [14] [15]. Other studies have focused on universities themselves, highlighting the importance of leadership, governance arrangements, quality assurance systems, and organizational capacity in shaping institutional performance [2] [7]. At the same time, growing attention has been directed toward labor-market outcomes and the extent to which higher education prepares graduates for employment [16] [17]. Although these perspectives have enriched understanding of reform processes, they often examine stakeholders in isolation. As a result, relatively little is known about how governments, universities, and private-sector actors interact in practice and how these relationships influence the implementation of reform.

Universities themselves have experienced a notable shift in expectations. No longer viewed solely as institutions responsible for teaching and research, they are increasingly expected to foster innovation, entrepreneurship, and regional development. Discussions surrounding world-class universities emphasize leadership capacity, governance flexibility, and the strategic mobilization of resources as critical determinants of institutional success [18] [19] [20]. Nevertheless, many universities operating in developing contexts continue to face significant challenges, including inadequate funding, limited research infrastructure, and weak connections with industry [21] [22] [23]. These constraints often reduce institutions' ability to respond effectively to reform expectations and reinforce the importance of partnerships that extend beyond the university itself.

Private-sector participation has therefore emerged as an increasingly important component of higher education reform. Employers are frequently viewed as valuable partners in ensuring that curriculum remains relevant to labor-market demands and that graduates possess competencies aligned with workplace expectations. Previous research suggests that collaboration with industry can contribute to curriculum development, knowledge transfer, research commercialization, and improved employability outcomes [24] [17]. In developing-country contexts, employer involvement in training and curriculum design has also been associated with efforts to reduce skills mismatches and facilitate school-to-work transitions [25] [16]. Yet the effectiveness of such partnerships depends heavily on the existence of supportive institutional arrangements, regulatory clarity, mutual trust, and the capacity of stakeholders to sustain long-term engagement [26] [27].

The Triple Helix Model proposed by Etzkowitz and Leydesdorff [28] [29] provides a useful framework for examining these relationships. The model argues that innovation and socio-economic development increasingly emerge through interactions among government, universities, and industry rather than through the actions of isolated institutions. Governments provide policy direction and regulatory support, universities contribute knowledge production and human capital development, and industry offers practical expertise and market perspectives. The model has been widely applied to explain collaboration in innovation systems, workforce development, and higher education governance [28] [11] [30]. However, much of the empirical evidence supporting the model has been generated in developed or emerging economies, where institutional capacities and governance structures differ substantially from those found in low-income settings. Whether the assumptions underlying the Triple Helix framework thoroughly capture the realities of resource-constrained higher education systems therefore remains an open question.

Madagascar offers a particularly important context through which these issues can be explored. The country's higher education system operates amid economic vulnerability, constrained public investment, increasing social demand for higher education, and growing expectations regarding graduate employability. Previous studies have identified persistent challenges related to governance, infrastructure, educational quality, and the alignment between university training and labor-market needs [31] [32] [17]. Political and administrative factors further shape the trajectory of reform initiatives and influence the extent to which policy objectives can be translated into institutional practice [33] [34] [35]. Although reform efforts have sought to improve both quality and relevance, collaboration among government agencies, universities, and private-sector actors appears to remain fragmented and weakly institutionalized.

Three important gaps emerge from the existing literature. First, studies of higher education reform have largely adopted single-actor perspectives, concentrating separately on government regulation, university governance, or labor-market outcomes without examining the interactions among these stakeholders. Second, empirical research on government–university–industry collaboration remains disproportionately concentrated in developed and emerging economies, leaving low-income countries underrepresented in discussions of collaborative governance. Third, despite increasing recognition of stakeholder engagement within African higher education research, limited empirical evidence exists regarding how coordination mechanisms, institutional capacities, and competing priorities shape reform implementation in practice.

These limitations are particularly evident in Madagascar. Existing research has primarily emphasized structural deficiencies, governance challenges, educational effectiveness, or graduate outcomes, while the processes through which different stakeholders negotiate responsibilities and coordinate reform efforts have received comparatively little attention. As a result, there remains limited understanding of how collaboration is enacted, constrained, and sustained within the Malagasy higher education system.

Against this backdrop, the present study examines the collaborative roles of government, universities, and the private sector in higher education reform in Madagascar. Drawing on qualitative evidence from the University of Toliara, the study explores how interactions among these stakeholders shape reform implementation and identifies the opportunities and constraints that influence collaborative governance in a resource-constrained environment. In doing so, the study contributes empirical evidence from an underrepresented context and offers a more nuanced understanding of how collaborative reform unfolds where institutional capacities and resources remain unevenly distributed.

2. Methods

2.1 Research Design

This study employed a qualitative case-study design to examine the collaborative roles of government, universities, and the private sector in higher education reform in Madagascar. A qualitative approach was considered appropriate because the phenomenon under investigation involves stakeholder interactions, governance practices, and institutional experiences that are embedded within specific social and organizational contexts. Rather than seeking statistical generalization, the study aimed to develop an in-depth understanding of how different actors interpret their roles, negotiate responsibilities, and respond to the challenges associated with reform implementation. The case-study approach also enabled the exploration of complex relationships and processes that may not be completely captured through quantitative methods.

2.2 Research Setting

The research was conducted at the University of Toliara, one of Madagascar's public higher education institutions and an active participant in the country's ongoing reform agenda. The university provided a suitable setting for examining how national policy directives are interpreted and implemented at the institutional level, while also allowing exploration of interactions between university actors, government agencies, and private-sector stakeholders.

Focusing on a single institutional setting facilitated a detailed examination of collaborative practices and governance dynamics within their natural context. This approach allowed the study to capture the complexity of stakeholder relationships and reform experiences that might otherwise be obscured in broader comparative investigations. Nevertheless, the findings should be interpreted with due consideration of the study's scope. The experiences reported here reflect the particular circumstances of the University of Toliara and may differ from those of other higher education institutions operating under distinct organizational, geographical, or resource conditions within Madagascar.

2.3 Participants and Data Collection

Data were derived from in-depth interviews and field observations involving individuals directly involved in higher education reform and related activities. Participants were selected purposively to ensure that those included possessed relevant knowledge and practical experience concerning higher education governance, institutional management, policy implementation, or university–industry collaboration.

Three criteria guided participant selection: (1) active involvement in higher education policymaking or administration, (2) leadership or academic responsibilities within the university, and (3) professional engagement in graduate recruitment, workforce development, or collaboration with higher education institutions. Based on these criteria, fifteen participants were recruited, consisting of six university administrators and academic staff members, five government officials responsible for higher education administration and policy, and four representatives from private-sector organizations involved in employment and skills development initiatives.

Interviews were conducted between June and August 2025 and lasted approximately 45 to 75 minutes. A semi-structured interview format was adopted to ensure consistency across interviews while allowing participants sufficient flexibility to elaborate on issues they considered important. The interview guide was informed by the objectives of the study and the Triple Helix framework, with questions focusing on stakeholder roles, patterns of collaboration, reform implementation, and perceived challenges. With participants' informed consent, interviews were audio-recorded and supplemented with field notes documenting contextual observations and preliminary reflections. All interview recordings were afterward transcribed verbatim to facilitate analysis.

2.4 Data Analysis

The data were analyzed using thematic analysis. The analytical process began with repeated reading of the interview transcripts and field notes to achieve familiarity with the data and identify preliminary impressions. Open coding was then undertaken to capture meaningful statements, recurring ideas, and patterns related to governance arrangements, collaborative practices, institutional responses, and reform experiences. Similar codes were subsequently grouped into broader categories and refined into themes through an iterative process of comparison and interpretation. Throughout the analysis, interview data were examined alongside field observations to identify areas of convergence and divergence across stakeholder groups. This constant comparative process enabled the researchers to refine emerging interpretations and ensure that the themes remained grounded in participants' accounts rather than predetermined assumptions.

Several strategies were employed to enhance the credibillity of the findings. First, data triangulation was achieved by comparing perspectives obtained from government officials, university representatives, and private-sector participants. Second, member checking was undertaken by sharing preliminary interpretations with selected participants to verify the accuracy and credibility of the researchers' interpretations. Third, prolonged engagement in the field facilitated a deeper understanding of institutional practices and stakeholder relationships. Fourth, an audit trail documenting interview procedures, coding decisions, and analytical reflections was maintained throughout the study to strengthen dependability and transparency. Finally, peer debriefing with academic colleagues was used to challenge emerging interpretations and minimize potential researcher bias. Collectively, these procedures contributed to the credibility, dependability, confirmability, and overall rigor of the research process.

3. Results and Discussion

3.1 Results

The findings indicate that higher education reform at the University of Toliara is shaped by the interaction of government directives, institutional responses, and private-sector involvement. Although collaboration among these actors exists, it is neither balanced nor consistently institutionalized. Participants described varying degrees of influence, coordination, and commitment across stakeholder groups, revealing both the potential and limitations of collaborative governance within the Malagasy higher education context. Four interconnected themes emerged from the analysis: government steering and regulatory influence, university responses and institutional capacity, private-sector engagement and labor-market alignment, and cross-cutting challenges affecting collaborative implementation.

3.1.1 Government Role in Higher Education Reform

Accounts from participants consistently depicted the *government* as the principal actor driving higher education reform. Through policy formulation, regulation, and institutional oversight, government agencies establish the broad direction within which universities operate. Officials responsible for higher education emphasized that national reforms are intended to improve educational quality, strengthen governance, and ensure that universities contribute to national development objectives. One government participant explained: "The ministry establishes the main reform direction, especially regarding curriculum standards, accreditation, and institutional governance." This perspective illustrates the state's influential role in defining institutional priorities and shaping the expectations placed upon higher education institutions.

The government's presence was also evident through mechanisms of regulation and quality assurance. University administrators acknowledged that accreditation requirements and reporting obligations significantly influence internal practices and decision-making processes. Compliance with national standards was frequently described as a prerequisite for maintaining institutional legitimacy. As one academic staff member noted: "Universities are required to follow national standards and reporting procedures to maintain academic legitimacy." At the same time, participants questioned whether existing regulatory frameworks were matched by adequate institutional support. While reform objectives were generally viewed as necessary and well-intended, several respondents highlighted the gap between policy aspirations and implementation realities. A university administrator commented: "Many reform policies are good on paper, but universities do not always receive sufficient funding or operational support to implement them effectively."

This observation points to an important tension within the reform process. Government institutions continue to exercise considerable steering power, yet the effectiveness of policy implementation depends heavily on the capacity of universities to translate directives into practice. Similar concerns emerged from private-sector representatives, who observed that bureaucratic procedures and resource constraints often slow reform initiatives. One participant from the private sector commented: "Coordination between policy objectives and institutional realities is still weak, especially regarding resource allocation and implementation support."

Taken together, these accounts suggest that the government's role extends beyond policymaking to encompass regulation and oversight. However, the transformative potential of reform is often limited by insufficient financial support, uneven implementation capacity, and underdeveloped coordination mechanisms. As a result, higher education reform in Madagascar appears to be characterized by strong state leadership accompanied by persistent implementation challenges. The following Table 1 summarizes the key dimensions of government involvement identified in this study.

Table 1. Government Roles in Higher Education Reform

Theme	**Empirical Findings**	**Illustrative Participant Insight**	**Analytical Interpretation**
Policy formulation	National reform agendas guide institutional priorities	Government officials emphasized the ministry's role in setting curriculum and governance standards	Government acts as the primary steering actor in reform implementation
Regulation and oversight	Accreditation and quality assurance requirements influence university practices	Universities reported compliance with national standards and reporting systems	Reform implementation is largely driven by regulatory mechanisms
Financial support	Funding remains insufficient and inconsistent	Participants highlighted difficulties implementing reforms without adequate resources	Resource limitations weaken policy effectiveness

Implementation capacity	Policy ambitions often exceed institutional capacity	Stakeholders reported gaps between reform objectives and operational realities	Coordination and support mechanisms remain underdeveloped

Source: Researcher's field data (2025)

3.1.2 University Responses and Institutional Capacity

This improvement can be seen in Figure **??**, which displays a bar chart comparing the average values of both variables. The graph shows that the post-test scores are consistently higher, indicating that interactive learning based on the integration of art and technology is capable of creating a more meaningful learning experience.

While government agencies provide policy direction, universities occupy a critical position in translating reform agendas into everyday institutional practice. Participants described university leadership as playing an important mediating role, adapting national directives to local realities while attempting to maintain continuity in academic activities. Administrators reported a range of institutional initiatives aimed at aligning university practices with reform expectations. These included curriculum revisions, efforts to improve academic management, and attempts to strengthen coordination across faculties and departments. One administrator explained:

> "The university has tried to adapt the curriculum to national reform standards, especially regarding program structure and teaching outcomes."

Another participant emphasized the importance of internal collaboration:

> "Department leaders are encouraged to coordinate more closely so that reform policies can be implemented consistently across faculties."

These efforts demonstrate that universities are not merely passive recipients of policy directives. Instead, institutional actors actively interpret, negotiate, and operationalize reform initiatives within the constraints of their organizational environments.

Despite this commitment, participants repeatedly pointed to the pressures associated with implementing reform under conditions of limited institutional support. Academic staff described increasing expectations to improve teaching quality, participate in reform activities, and contribute to institutional development while managing substantial workloads. One lecturer observed:

> "Lecturers are expected to improve course quality and participate in reform activities, but the workload remains very heavy."

Another academic participant added:

> "Many staff members are committed to reform, but limited training opportunities and insufficient facilities slow the process."

These reflections suggest that enthusiasm for reform does not automatically translate into effective implementation. Institutional conditions significantly influence the extent to which academic staff can engage with and sustain reform initiatives.

Research and innovation were identified as particularly vulnerable areas. Participants acknowledged growing expectations for universities to strengthen knowledge production and external engagement, yet many questioned whether the necessary infrastructure and financial resources were available to support such ambitions. One administrator stated:

> "Research development is still difficult because laboratories, equipment, and research funding remain insufficient."

Similarly, another informant commented:

> "Universities are trying to strengthen innovation and external collaboration, but institutional resources are still very limited."

The findings indicate that universities frequently adopt a reactive posture, prioritizing compliance with external requirements over longer-term strategic development. In practice, institutional efforts tend to focus on meeting immediate regulatory obligations rather than expanding innovation capacity or pursuing transformative change. This pattern reflects broader tensions within higher education systems operating under resource constraints, where institutions are expected to achieve ambitious reform objectives without corresponding investments in organizational capacity. The principal institutional responses and challenges identified by participants are summarized in Table 2.

Table 2. University-Level Responses to Reform

Theme	Institutional Response	Key Constraint	Analytical Interpretation
Curriculum adaptation	Revision of programs to align with national reforms	Limited financial and technical resources	Universities act as policy implementers but face capacity constraints
Institutional management	Leadership-driven coordination of reform activities	Administrative limitations	Internal governance mediates reform implementation
Academic engagement	Staff participation in teaching and reform initiatives	High workloads and limited training opportunities	Commitment exists but is constrained by institutional conditions
Research and innovation	Efforts to strengthen research and external engagement	Insufficient funding and infrastructure	Reform remains focused on compliance rather than innovation

Source: Researcher's field data (2025)

3.1.3 Private-Sector Engagement and Collaboration

Private-sector representatives viewed collaboration with universities as increasingly important in addressing the mismatch between academic preparation and workplace expectations. Their accounts frequently highlighted concerns about graduates entering the labor market with adequate theoretical knowledge but insufficient practical competencies. From their perspective, stronger engagement between employers and universities is necessary to ensure that educational programs reflect the realities of professional practice. One private-sector participant explained:

> "Many graduates have academic knowledge, but companies still need to train them again because practical skills are limited."

Similarly, another representative emphasized the importance of continuous dialogue between educational institutions and employers:

> "Universities and employers need to communicate more regularly so that training reflects the realities of the labor market."

These observations suggest that private-sector involvement is primarily motivated by a desire to improve graduate preparedness and strengthen the alignment between educational outcomes and workforce demands.

University participants largely shared this perspective and acknowledged the value of external engagement. Internship programs were frequently cited as one of the most tangible forms of collaboration, offering students opportunities to gain exposure to professional environments while developing workplace competencies. An academic staff member noted:

> "Internships help students understand workplace expectations and improve their professional readiness."

However, respondents also pointed out that many collaborative initiatives depend heavily on informal arrangements rather than institutionalized structures. As one university administrator observed:

> "Some companies provide feedback on graduate skills, but this cooperation is still informal and depends on personal relationships."

This reliance on individual initiatives limits the consistency and sustainability of university–industry interactions.

Government officials also recognized the strategic importance of private-sector participation in higher education reform. Nevertheless, they acknowledged that formal mechanisms capable of facilitating sustained collaboration remain underdeveloped. One government participant explained:

> "There is recognition that the private sector should contribute more to higher education, but coordination mechanisms are still not clearly organized."

Another official added:

> "Partnerships exist, but they are not yet integrated into a long-term national strategy."

These accounts reveal a notable gap between policy aspirations and institutional practice. Although stakeholders broadly agree on the importance of collaboration, they differ in their capacity to establish and maintain structured partnerships.

The findings further indicate that private-sector engagement remains concentrated on short-term employment concerns rather than broader innovation agendas. Existing forms of interaction tend to focus on internships, recruitment activities, and occasional curriculum feedback, whereas joint research initiatives and long-term knowledge partnerships are comparatively rare. This pattern reflects the uneven development of university–industry relationships within resource-constrained contexts, where institutional limitations often limit opportunities for deeper collaboration. The following Table 3 presents the principal forms of private-sector engagement identified in this study.

Table 3. Forms of Private-Sector Engagement

Form of Engagement	Evidence from Participants	Degree of Institutionalization	Implications for Reform
Internships	Students placed in companies for workplace exposure	Low to moderate	Supports employability but remains project-based
Curriculum input	Employers provide feedback on graduate skills	Low	Labor-market needs are considered but not systematically integrated
Employment linkage	Graduate recruitment by private firms	Moderate	Strengthens workforce alignment
Strategic partnerships	Limited long-term collaboration agreements	Low	University–industry collaboration remains weakly institutionalized

Source: Researcher's field data (2025)

3.1.4 Cross-Cutting Challenges in Collaboration

Across stakeholder groups, participants consistently identified coordination as one of the most significant obstacles affecting the implementation of higher education reform. Although opportunities for interaction exist, communication among institutions was often described as fragmented, irregular, and dependent on specific initiatives rather than embedded organizational practices. A university administrator reflected:

> "There are many discussions about reform, but coordination between institutions is still weak and not always continuous."

This concern was echoed by government representatives. One participant explained:

> "Policies are introduced at the national level, but communication with universities and external partners is sometimes insufficient during implementation."

These accounts suggest that collaborative efforts frequently lack the continuity necessary to build shared understanding and maintain momentum over time.

Differences in institutional priorities also emerged as a recurring source of tension. Universities tended to prioritize educational objectives and administrative responsibilities, whereas private-sector organizations were more concerned with workforce readiness and operational efficiency. These differing perspectives sometimes complicated efforts to develop common strategies. One private-sector representative stated:

> "Companies expect graduates to be immediately ready for work, but universities do not always have the resources to provide that kind of training."

Another participant commented:

> "Stakeholders may agree on reform objectives in principle, but their expectations and capacities are very different in practice."

Such observations indicate that collaboration is shaped not only by structural limitations but also by divergent understandings of what reform should achieve and how responsibilities should be distributed among actors.

Resource constraints further compounded these difficulties. Participants repeatedly referred to financial limitations and administrative burdens that hindered the sustainability of collaborative initiatives. While ideas for partnership were often abundant, translating them into practice proved much more challenging. As one academic staff member explained:

> "Many collaborative ideas are being discussed, but implementation becomes difficult because funding is limited."

A government official similarly noted:

> "Financial support and administrative follow-up are not always sufficient to maintain cooperation between stakeholders."

These constraints reduce stakeholders' ability to organize joint activities, sustain long-term engagement, and institutionalize collaborative practices.

Another theme emerging from the data was the reliance on informal networks. Participants frequently described partnerships as dependent on personal contacts rather than formal agreements or established procedures. A university participant observed:

> "Cooperation often depends on who knows whom rather than on official institutional agreements."

Although interpersonal relationships may facilitate immediate action, their informal nature creates vulnerabilities. Changes in leadership, staff turnover, or shifting organizational priorities can disrupt existing collaborations and undermine continuity.

These findings reveal that collaborative reform in Madagascar is constrained by fragmented communication, competing institutional priorities, limited resources, and the absence of durable coordination mechanisms. While stakeholders generally recognize the value of working together, the structures needed to support sustained and effective collaboration remain insufficiently developed.

3.2 Discussion

The findings of this study provide insight into how higher education reform is negotiated and implemented within a resource-constrained environment. Rather than emerging from a balanced partnership among stakeholders, reform implementation in Madagascar appears to be shaped by unequal distributions of authority, resources, and institutional capacity. Although government agencies, universities, and private-sector actors all participate in the reform process, their contributions differ substantially in scope and influence. These differences help explain why collaboration often falls short of the integrated governance arrangements envisioned in policy discourse.

One of the most prominent findings concerns the continuing dominance of the state in shaping the direction of higher education reform. Government institutions retain considerable influence through their authority to formulate policies, establish quality standards, and regulate institutional practices. This observation aligns with earlier scholarship arguing that the state continues to play a central steering role in higher education systems, particularly in contexts where public institutions remain heavily dependent on government oversight and financing [1] [2] [36]. However, the Malagasy experience also demonstrates that regulatory influence alone does not guarantee effective implementation. Participants consistently described a disconnect between policy ambitions and the resources available to support them. Reform initiatives frequently introduced new expectations related to quality improvement, accountability, and institutional performance without corresponding investments in infrastructure, staffing, and operational support.

This mismatch suggests that implementation challenges should not be understood simply as evidence of administrative inefficiency. Rather, they reflect deeper tensions between centralized policy aspirations and the institutional realities faced by universities operating under conditions of scarcity. Similar patterns have been documented in other developing contexts, where ambitious reform agendas often coexist with fragile administrative systems and competing developmental priorities [31] [33] [37]. In Madagascar, reform therefore assumes a predominantly compliance-oriented character. Universities devote substantial effort to satisfying external requirements yet often lack the means necessary to pursue broader institutional transformation. This finding lends support to critiques of reform approaches that emphasize regulation while paying insufficient attention to institutional enablement and capacity building [7] [14] [20].

The study also highlights the active, albeit constrained, role of universities in mediating reform processes. Contrary to portrayals of higher education institutions as passive recipients of external mandates, university leaders and academic staff demonstrated agency through curriculum adaptation, internal coordination, and efforts to improve educational practices. These initiatives indicate that institutional actors do not merely implement reform mechanically; they interpret policies, negotiate competing demands, and attempt to adapt them to local conditions. Such observations resonate with scholarship emphasizing the importance of leadership and organizational capacity in shaping reform outcomes [2] [6] [38].

Nevertheless, the ability of universities to act strategically remains limited by structural constraints. Heavy workloads, inadequate infrastructure, insufficient research funding, and restricted opportunities for professional development reduce institutional flexibility and hinder innovation. The findings therefore suggest that institutional commitment alone is insufficient to generate meaningful change. Universities may embrace reform objectives and invest considerable effort in implementation, yet without sustained support their responses are likely to remain reactive and short-term. Similar dynamics have been observed across higher education systems in the Global South, where institutional adaptation frequently occurs within environments characterized by chronic resource shortages and uneven organizational development [22] [32] [39]. In this sense, institutional autonomy should not be viewed solely as a matter of governance design but also as a function of the resources required to exercise that autonomy effectively.

From the perspective of the Triple Helix framework, the findings reveal important contextual variations in the nature of collaboration among government, universities, and industry. The model assumes that innovation and development are increasingly driven by dynamic and mutually reinforcing interactions among these three spheres [29] [30] [40]. The Malagasy case, however, presents a more uneven configuration. Government actors occupy a dominant position, universities function primarily as implementers, and private-sector participation remains relatively limited and concentrated on immediate labor-market concerns. Collaboration is therefore characterized less by reciprocal partnerships and more by asymmetrical relationships shaped by differences in authority and capacity.

These findings do not necessarily invalidate the Triple Helix perspective. Instead, they point to the need for a more context-sensitive interpretation of the framework. In low-income settings, collaborative arrangements may evolve differently from the innovation-oriented partnerships often described in the literature. Resource dependency, institutional fragility, and competing organizational priorities influence both the depth and the scope of stakeholder engagement. Under such circumstances, collaboration may emerge first through practical concerns related to employability and implementation before expanding toward broader objectives such as joint research, innovation, and knowledge commercialization. The Malagasy experience therefore extends existing applications of the Triple Helix Model by illustrating how context conditions shape the form and intensity of stakeholder interaction.

The nature of private-sector involvement further reinforces this interpretation. Employers were primarily engaged through internships, recruitment activities, and occasional consultation regarding graduate competencies. While these initiatives contribute to strengthening labor-market relevance, they remain weakly institutionalized and are rarely integrated into broader strategies for research and innovation. Previous studies have similarly noted that sustained collaboration depends upon clear incentives, formal coordination structures, and mutually beneficial arrangements [5] [16]. The absence of such mechanisms limits the extent to which the private sector can contribute to transformative reform processes. As a result, industry engagement in Madagascar occupies a peripheral rather than strategic position within higher education governance.

At the same time, the emphasis placed by participants on employability and workforce preparedness underscores the continuing importance of aligning higher education with societal needs. Graduate outcomes increasingly serve as indicators of institutional effectiveness and public accountability [41] [42] [43]. The findings suggest that collaboration with employers can strengthen this alignment by exposing students to professional environments and informing curriculum development. However, isolated initiatives are unlikely to address structural mismatches between educational provisions and labor-market expectations. More integrated approaches that connect policy frameworks, institutional practices, and economic planning are needed if higher education reform is to respond effectively to changing workforce demands.

Another important contribution of this study concerns the recognition that collaboration itself can-not be assumed. Although stakeholder cooperation is frequently invoked as a desirable objective within reform discourse, the findings reveal that its realization depends on the existence of mechanisms capable of sustaining interaction over time. Fragmented communication, differing institutional priorities, and limited financial resources weaken collaborative capacity and create dependence on informal relationships. While personal networks may facilitate short-term cooperation, they offer limited protection against leadership transitions, staff turnover, and shifting organizational agendas. The absence of formal structures therefore undermines continuity and reduces the likelihood that collaborative practices will become embedded within institutional routines.

These observations also resonate with the global perspective proposed by Marginson and Rhoades [1], which emphasizes the interplay among global influences, national policies, and local institutional practices. Reform outcomes in Madagascar reflect neither a straightforward implementation of international models nor a purely domestic response to local needs. Instead, they emerge through ongoing negotiations among actors operating within different spheres of influence and under unequal conditions. Such a perspective moves beyond simplistic state-centered or market-driven explanations and highlights the relational nature of higher education governance.

Taken together, the findings demonstrate that higher education reform in Madagascar is best understood as a negotiated process shaped by both structural constraints and stakeholder agency. Reform outcomes are influenced not only by the quality of policy design but also by institutional capacities, resource availability, and the ability of actors to coordinate their efforts. In contexts characterized by limited resources and uneven capacities, collaboration should be regarded as an achievement that requires deliberate investment rather than as an automatic consequence of policy intention.

This study contributes to the literature in both empirical and theoretical terms. Empirically, it offers evidence from Madagascar, a setting that has received limited attention within discussions of collaborative governance and higher education reform. Theoretically, it extends understanding of the Triple Helix framework by demonstrating that stakeholder relationships in resource-constrained environments may remain state-centered, weakly institutionalized, and oriented toward immediate implementation concerns rather than innovation-driven partnerships. These findings suggest that strengthening collaborative governance in developing-country contexts requires more than policy alignment. It also demands sustained investment in institutional capacity, the creation of formal coordination platforms, and long-term commitment from all stakeholders involved in the reform process.

4. Conclusion

This study examined the roles of government, universities, and the private sector in the implementation of higher education reform in Madagascar. The findings reveal that reform remains predominantly state-led, with government institutions shaping the process through policy formulation, regulation, and quality assurance mechanisms. Universities play a central role in translating these directives into practice through curriculum adaptation, internal coordination, and the delivery of academic activities, although their efforts are constrained by inadequate funding, limited infrastructure, heavy workloads, and insufficient support for research and innovation. Private-sector participation contributes mainly to enhancing graduate employability through internships, recruitment activities, and feedback on workforce needs, yet these interactions remain weakly institutionalized and rarely develop into long-term strategic partnerships. The study further shows that collaboration among stakeholders is influenced by unequal resources, institutional capacities, and organizational priorities. Fragmented communication, dependence on informal networks, and limited financial support continue to hinder the development of sustained and effective partnerships. By providing evidence from Madagascar, a context that remains underrepresented in the literature, this study highlights the need to strengthen institutional capacity, establish formal coordination mechanisms, and foster more consistent engagement between universities and external partners. Improving higher education therefore requires more than regulatory initiatives; it depends on stakeholders' ability to build trust, mobilize resources, and sustain cooperation over time. Strengthening these foundations is essential to improving educational quality, enhancing graduate relevance, and increasing the contribution of higher education to national development. Given that this research focused on a single public university and a relatively small number of participants, future studies could explore collaborative practices across different institutions and stakeholder groups to provide a broader understanding of higher education reform in Madagascar.

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