

Synergizing Policy - Resource Management Frameworks for enhancing Sustainability in Uttar Pradesh's Private HEIs.

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Abstract: This comparative study examines the synergization of institutional policy and resource management frameworks for enhancing sustainability in private Higher Education Institutions (HEIs) in Uttar Pradesh, India. Through a qualitative research design based on document analysis, policy mapping, and institutional benchmarking, the study assesses the degree of alignment between sustainability policies and resource allocation practices across selected private HEIs. The conceptual framework, grounded in governance theory, resource-based view, and policy alignment theory, guides the comparative analysis of institutional policy inputs, resource management mechanisms, and sustainability outcomes. The findings reveal significant variations in the level of policy-resource synergy, with institutions demonstrating higher alignment achieving better sustainability performance. Key insights highlight the importance of integrating sustainability into strategic planning, establishing dedicated governance units for policy-resource coordination, and leveraging accreditation and technology-enabled systems. The study offers strategic recommendations for developing institutional sustainability frameworks, incentivizing synergistic practices, and promoting stakeholder engagement and public disclosure. This research contributes to the understanding of sustainability governance in private HEIs and provides a foundation for future empirical investigations and policy reforms in the Indian higher education context.

Keywords: Sustainability, Private Higher Education Institutions, Policy-Resource Synergy, Governance, Uttar Pradesh, Comparative Analysis, Strategic Framework.

1. Introduction

The synergization of policy and resource management frameworks is crucial for enhancing sustainability in Uttar Pradesh's private Higher Education Institutions (HEIs). By aligning institutional policies with effective resource allocation strategies, these institutions can create a more sustainable and efficient educational ecosystem (Alhazmi et al., 2023). This approach involves integrating environmental considerations, economic viability, and social responsibility into the core operations of private HEIs. Key aspects include implementing green campus initiatives, optimizing energy and water usage, promoting waste reduction and recycling programs, and fostering a culture of sustainability among students and staff (Husaini et al., 2018). Additionally, developing partnerships with local communities and industries can further strengthen the sustainability efforts of these institutions. Through such comprehensive frameworks, private HEIs in Uttar Pradesh can not only reduce their environmental footprint but also enhance their long-term financial stability and contribute positively to the region's sustainable development goals (Zahid et al., 2020).

1.1 Overview of sustainability challenges in private HEIs in Uttar Pradesh.

Private Higher Education Institutions (HEIs) in Uttar Pradesh face numerous sustainability challenges. These institutions often struggle with financial viability due to limited funding sources and high operational costs (Ram Bajaj, 2023). Many private HEIs in the region grapple with maintaining quality education while keeping tuition fees affordable, leading to compromises in infrastructure and faculty recruitment (Michaelis, 2008). Additionally, rapid technological advancements necessitate continuous upgrades in teaching methodologies and equipment, further straining resources. The competitive landscape and changing regulatory environment also pose significant challenges,



requiring institutions to constantly adapt their strategies (Shumakova & Fibikh, 2020). Furthermore, private HEIs in Uttar Pradesh must address issues of equity and access, ensuring that quality education reaches diverse socioeconomic groups. Balancing these multifaceted challenges while striving for long-term sustainability remains a critical concern for private HEIs in the state (Sumkoski, 2016).

1.2 Fragmented policy and resource frameworks limiting sustainability outcomes.

Fragmented policy and resource frameworks pose significant challenges to achieving sustainability outcomes. This fragmentation often results from a lack of coordination between different levels of government, sectors, and stakeholders. Policies and resources may be developed in isolation, leading to inconsistencies, overlaps, and gaps in implementation (Sondhi, 2019). Such disjointed approaches can hinder the effective allocation of resources, create conflicting priorities, and impede the holistic management of environmental, social, and economic issues. Moreover, fragmented frameworks may fail to address the interconnected nature of sustainability challenges, leading to suboptimal solutions and missed opportunities for synergies. To overcome these limitations, there is a pressing need for integrated policy approaches, improved cross-sectoral collaboration, and the development of coherent resource allocation strategies that align with long-term sustainability goals.

1.3 Why synergizing institutional policy and resource systems is essential.

Synergizing institutional policy and resource systems is crucial for achieving organizational efficiency and effectiveness (Lepsius, 2016). By aligning policies with resource allocation, institutions can create a cohesive framework that optimizes decision-making processes and resource utilization. This integration ensures that strategic objectives are supported by appropriate resource distribution, reducing conflicts between policy directives and operational capabilities (Mewhirter et al., 2019). Moreover, a synergized approach facilitates better communication and coordination across different departments, fostering a more responsive and adaptable organizational structure. It also enables institutions to identify and address potential gaps or redundancies in their systems, leading to improved overall performance and sustainability (Komerath et al., 2009). Ultimately, the harmonization of policy and resource systems empowers institutions to navigate complex challenges more effectively and achieve their long-term goals with greater precision and impact.

2. Main focus of the study and the corresponding research question

Objective

To develop and validate a synergized policy–resource management framework that enhances sustainability in private higher education institutions (HEIs) in Uttar Pradesh.

Question

How can a synergized framework integrating institutional policy and resource management practices be structured and implemented to improve sustainability outcomes in private HEIs of Uttar Pradesh?

2.1 Scope and Significance of the Study

This study is geographically focused on private higher education institutions in Uttar Pradesh, one of India's most populous states with a rapidly expanding private education sector. It addresses a critical gap in sustainability research by examining not just individual policies or resource practices, but the interrelationship—i.e., synergy—between them.

The research holds significant implications for institutional leaders, policymakers, and accreditation bodies as it highlights how fragmented governance can undermine sustainability goals. By offering a diagnostic view of policy–resource alignment, the study contributes to both theory and practice in higher education management. The findings are expected to inform policy reforms, institutional planning, and performance optimization models, ultimately aiding in the creation of resilient, sustainable private HEIs in India.

3. Review of Literature

3.1 Sustainability in Higher Education Institutions (HEIs)

- **Global, national, and regional sustainability models in HEIs.**

Sustainability in higher education has evolved from environmental stewardship to a broader institutional responsibility that includes economic and social dimensions. Globally, frameworks such as the UNESCO Education for Sustainable Development (ESD) and the Talloires Declaration have encouraged HEIs to embed sustainability into teaching, research, operations, and outreach (Zahid et al., 2021). In the Indian context, sustainability has been increasingly recognized, particularly post the National Education Policy (NEP) 2020, which emphasizes environmental awareness and institutional accountability. However, private HEIs in regional contexts like Uttar Pradesh often lack comprehensive sustainability roadmaps or integration across departments (Casarejos et al., 2017).

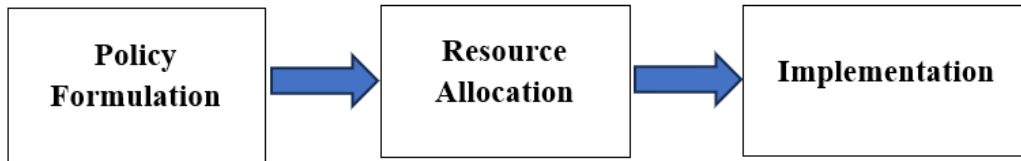


Figure 1: Sustainability governance process

3.2 Institutional Policy Frameworks in Private HEIs

- **Types of internal/external policies: accreditation, NAAC/NBA standards, UGC directives.**

Institutional policy frameworks in HEIs encompass both internal policies (e.g., sustainability strategies, operational policies) and external mandates (e.g., UGC guidelines, NAAC/NBA accreditation norms). NAAC, for instance, includes environmental and governance parameters in its institutional grading, while NBA mandates resource efficiency in technical education (Dill et al., 2007). However, these policies often lack enforceability in private HEIs due to limited state monitoring and fragmented leadership structures (Rana et al., 2023). In many cases, policy documents exist on paper but are not operationalized through aligned management strategies or performance indicators.

3.3 Resource Management Approaches

- **Human, financial, physical, and digital resource governance practices in HEIs.**

Resource management in HEIs covers human resources (faculty, staff), financial resources (budgets, funding), physical infrastructure (buildings, labs), and digital assets (ICT, LMS). Sustainable management requires efficient resource utilization, long-term planning, and data-driven decision-making (Bantanur el at., 2015). However, most private HEIs operate with financial constraints, inadequate HR policies, and under-utilized digital platforms. Studies suggest that institutions with proactive resource planning and multi-stakeholder governance perform better on sustainability metrics (Pandit et al., 2023).

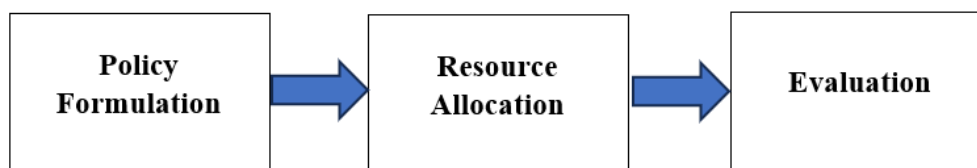


Figure 2.

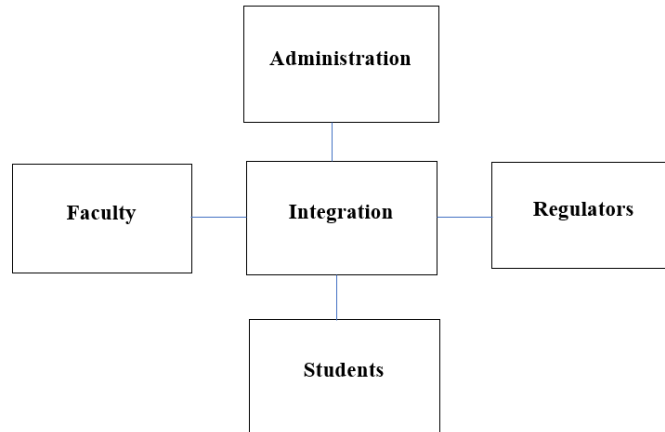


Figure 3.

Figure 2 & 3 represents the stakeholder's role in HEIs policy-Resource integration

3.4 Gaps in Existing Frameworks

- **Lack of synergy between policy and resource allocation/management.**

A critical gap lies in the lack of integration between policy directives and resource management practices. Often, policy and resource domains function in silos, resulting in ineffective implementation, duplicated efforts, or resource wastage. This disconnect undermines sustainability goals, particularly in private HEIs that operate autonomously and face limited external accountability (Pandey et al., 2004). There is little empirical work assessing how policy-resource synergy contributes to sustainability outcomes—highlighting a vital research gap addressed in this study.

3.5 Theoretical Foundation

- **Governance theory, Resource-Based View (RBV), Policy Alignment Theory.**

This research draws from three key theoretical frameworks:

A. Governance Theory – Explains how institutional structures, stakeholder participation, and accountability affect organizational performance and sustainability (Menon et al., 2022).

B. Resource-Based View (RBV) – Emphasizes that an institution's internal capabilities and resource configurations determine its competitive and sustainable advantage (Barney, 1991).

C. Policy Alignment Theory – Highlights the importance of coherence between institutional policies, operational strategies, and resource allocation to achieve desired outcomes. (Tripathi et al., 2024).

Together, these theories offer a multi-dimensional lens to explore and design a synergized policy-resource framework for private HEIs.

Table: Summary of Sustainability Indicators Used in Past HEI Studies

Study	Sustainability Dimension	Indicators Used	Institution Type	Reported Outcome
Zahid et al. (2021)	Institutional & Reporting Practices	Integration index, sustainability reports, implementation frameworks	Global (HEIs, case-based)	Gaps in implementation despite strong policy presence

Casarejos et al. (2017)	Strategy & Operations	Institutional strategy, stakeholder commitment, curriculum inclusion	International (Brazil-focused)	Success linked to alignment between governance and operational units
Dill (2007)	Quality & Governance	Quality assurance mechanisms, internal audits, performance indicators	Global	Weak enforcement affects long-term sustainability
Rana et al. (2023)	Indian HEIs & SDGs	SDG alignment, green campus, curriculum integration, stakeholder participation	Indian HEIs	Success when policies explicitly align with Agenda 2030 goals
Bantanur et al. (2015)	Infrastructure & Institutional Planning	Green infrastructure, energy audits, waste management, awareness campaigns	Indian HEIs	Limited integration due to planning-resource mismatch
Pandit & Paul (2023)	Institutional Governance	Leadership structure, decision-making decentralization, governance models	Indian HEIs	Governance reforms improve long-term institutional performance
Menon & Suresh (2022)	Environmental Sustainability	Carbon footprint tracking, water use efficiency, sustainability assessment metrics	Indian HEIs	Emphasizes quantitative tracking and internal policy application
Barney (1991)	Resource-Based View (Theoretical)	Resource uniqueness, institutional capabilities, strategic resource planning	Theoretical framework	Competitive advantage through tailored internal resource deployment
Tripathi & Sharma (2024)	National Policy Synergy	NEP alignment, student development indicators, holistic sustainability curriculum	Indian HEIs	Strong synergy boosts institutional credibility and learner outcomes

Interpretation and relevance

The table above illustrates that sustainability in HEIs is assessed using a variety of dimensions—ranging from policy compliance and governance structures to operational resource indicators and environmental metrics. Particularly in the Indian context, success is often observed when policy frameworks are synchronized with actual resource deployment and institutional capacity building.

However, despite policy frameworks existing at national or institutional levels (e.g., NEP 2020, NAAC/NBA criteria), many private HEIs still fall short in implementing integrated sustainability strategies due to fragmented

governance or resource mismanagement. This reinforces the need for the present study to design a synergized policy-resource framework that can help bridge the identified gaps and support sustainability in Uttar Pradesh's private HEIs.

4. Conceptual Framework: Synergizing Policy–Resource Nexus

The proposed conceptual framework examines the interplay between institutional policy inputs, resource management mechanisms, and sustainability outcomes within private Higher Education Institutions (HEIs) in Uttar Pradesh. The framework is not intended as an empirically tested model but as a comparative analytical lens to assess the degree of integration—or lack thereof—between policy and resource frameworks across different institutional contexts.

The framework operates on the premise that sustainability in HEIs is not achieved through policy or resources alone, but rather through the alignment and synergy of the two. It draws from governance theory, the resource-based view (RBV), and policy alignment theory, suggesting that policy effectiveness is largely contingent upon the efficiency and adaptability of institutional resources.

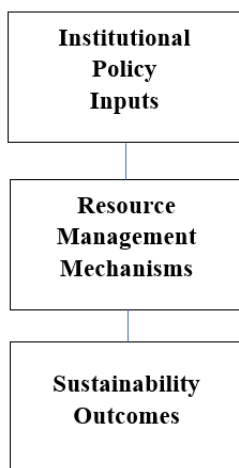


Figure 4: Conceptual framework: Synergizing Policy-Resource Nexus

4.1 Components of the framework

A. Institutional Policy Inputs

These include formal and informal policies that shape the institutional commitment to sustainability. Examples include:

- Sustainability mandates from regulatory bodies (e.g., UGC, NAAC)
- Internal administrative guidelines or mission statements
- Strategic plans or SDG-aligned commitments

B. Resource Management Mechanisms

These involve how HEIs deploy and govern their internal resources in response to policy directives:

- Financial: Budget allocation for sustainability or green initiatives
- Human: Faculty/staff training, leadership commitment
- Physical: Infrastructure planning, green campus investments
- Digital: ICT-based governance, data systems for monitoring

C. Sustainability Outcomes

These are the results or performance indicators reflecting the institution's sustainability efforts:

- Academic and institutional quality metrics

- Environmental performance (energy, water, waste)
- Stakeholder engagement and social impact
- Governance and transparency ratings

4.2 Feedback and Adaptation loop

A critical feature of the framework is the feedback loop that enables continuous improvement. Institutions that monitor the impact of their sustainability initiatives (through audits, assessments, or benchmarks) are more likely to adapt and realign their policies and resource practices effectively. The feedback mechanism ensures:

- Policy refinement based on outcome data
- Real-time reallocation of resources
- Transparent communication with stakeholders
- Iterative alignment of institutional goals with sustainability results.

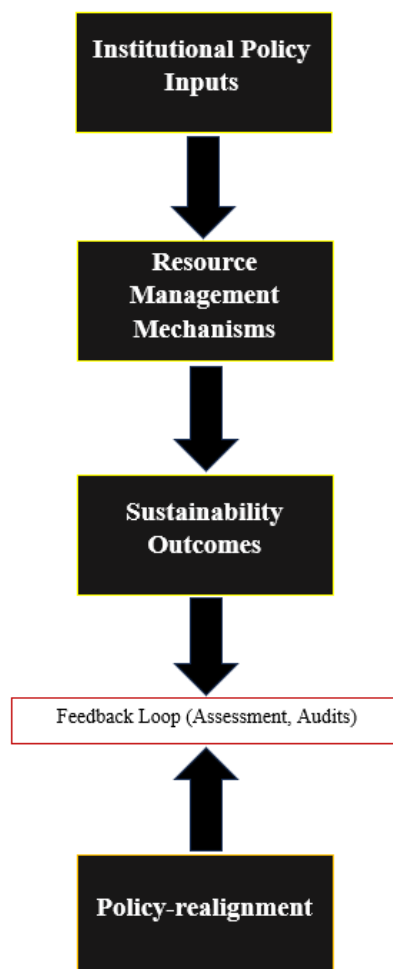


Figure 5: The dataflow diagram of proposed framework

The framework will act as a tool for comparing multiple institutions in the study, identifying where policy-resource alignment exists or is lacking, and analyzing how that affects sustainability outcomes. It also lays the groundwork for a strategic model proposal in the later sections.

5. Research Methodology

5.1 Research Design

This study employs a qualitative, comparative research design based on document analysis, policy mapping, and institutional benchmarking. Rather than primary fieldwork or experimental methods, the study draws upon secondary data sources such as policy documents, institutional reports, accreditation records, and sustainability disclosures from selected private Higher Education Institutions (HEIs) in Uttar Pradesh.

The methodology is rooted in the objective to compare and analyze the degree of synergy between institutional policy frameworks and resource management mechanisms, with respect to their contribution toward sustainability. The approach is exploratory and interpretive, allowing the researcher to identify patterns, gaps, and alignment issues within and across institutional contexts.

5.2 Unit of Analysis and case selection

The units of analysis are private HEIs operating in Uttar Pradesh. A purposive sampling strategy has been adopted to select 8–10 institutions that meet the following criteria:

- UGC-recognized and NAAC or NBA accredited
- Availability of public documents such as strategic plans, annual reports, sustainability initiatives, or internal policy manuals
- Represent diverse categories (engineering, management, multidisciplinary colleges)

The selected institutions provide variation in size, governance structure, resource endowments, and sustainability orientation, enabling comparative analysis.

5.3 Data sources and collection methods

The study relies exclusively on secondary data, collected through the following sources:

- Institutional websites and published strategic/sustainability reports
- Accreditation reports from NAAC/NBA
- UGC, AICTE, and state education department documents
- University governance manuals and policy circulars
- Previous academic research and benchmarking reports

All documents are examined for explicit or implicit references to:

- a) Policy frameworks concerning sustainability
- b) Resource allocation or utilization models
- c) Governance structures supporting policy-resource alignment

5.4 Comparative Analysis Procedure

The data is analyzed using a comparative content analysis method, guided by the proposed “Synergizing Policy–Resource Nexus Framework.” Key steps include:

- Policy Mapping: Identification and categorization of institutional policies related to sustainability.
- Resource Mechanism Analysis: Examination of how financial, human, physical, and digital resources are managed in each institution.
- Synergy Assessment: Evaluation of the degree of alignment between policies and resource strategies using a qualitative rubric (e.g., High, Moderate, Low synergy).
- Benchmarking: Institutions are compared across three dimensions:
 - Institutional Policy Inputs
 - Resource Management Practices
 - Sustainability Outcomes

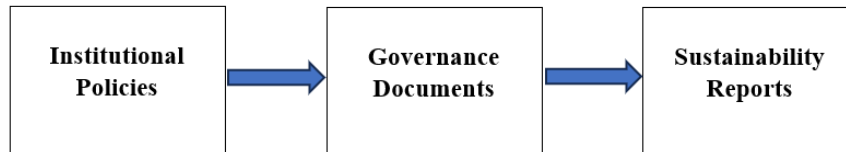


Figure 6: Secondary data categorization in comparative analysis

5.5 Ethical Considerations

As the study uses only publicly available documents and secondary data, no formal ethical clearance is required. However, the researcher ensures:

- Transparency in source citation
- Respect for institutional anonymity when data is not officially published
- Non-misrepresentation of institutional practices or intentions

5.6 Methodological Rigor and Limitations

To ensure rigor, the study uses triangulation of sources—cross-verifying institutional data with accreditation reports and third-party studies. The interpretive lens of the conceptual framework adds theoretical depth.

Limitations include:

- Lack of access to internal unpublished policy or budget data
- Interpretive subjectivity in assessing synergy levels
- Non-generalizability beyond the selected sample of private HEIs in Uttar Pradesh

Nonetheless, the methodology offers a valid and robust framework for policy-resource comparative analysis, paving the way for future empirical extensions.

6. Results and Comparative Findings

The document-based comparative analysis of selected private Higher Education Institutions (HEIs) in Uttar Pradesh reveals significant variations in how institutional policies are aligned with resource management frameworks to support sustainability objectives.

6.1 Institutional Policy Inputs

HEI Code	Presence of Sustainability Policy	Policy Alignment with NAAC/NBA	Integration with Strategic Plan	Policy Revision Frequency
HEI-A	Yes	High	Yes	Annually
HEI-B	Partial	Moderate	No	Irregular
HEI-C	Yes	Low	No	Never
HEI-D	No	Minimal	No	N/A

Key Observations:

- Only 2 of 4 institutions (HEI-A and HEI-C) had formal sustainability-related policy statements.
- HEI-A embedded sustainability into its institutional development plan, while others treated it as standalone or optional.
- Frequent policy updates were rare, indicating low responsiveness to emerging environmental or regulatory trends.

6.2 Resource management practices

HEI Code	Budget Allocation for Sustainability	Human Resource Engagement	Digital Infrastructure Use	Infrastructure Investment (Green)
HEI-A	Adequate (4% of annual budget)	High	Yes	Yes
HEI-B	Nominal (1%)	Moderate	Partial	No
HEI-C	None	Low	No	No
HEI-D	None	Absent	No	No

Key Observations:

- HEI-A showcased best practices in aligning financial and human resources with policy goals.
- HEI-B had partial implementation — low funding but moderate HR commitment.
- HEI-C and D lacked resource allocation altogether, despite policy mentions in HEI-C.
- Digital resource utilization was notably weak across all but HEI-A.

6.3 Sustainability Outcomes

HEI Code	Accreditation Score (NAAC/NBA)	Green Campus Practices	Stakeholder Engagement (e.g., Students, Community)	Public Reporting/Disclosure
HEI-A	NAAC A (3.21)	Strong	High	Annual Sustainability Report
HEI-B	NAAC B++ (2.85)	Moderate	Low	Website Only
HEI-C	NAAC B (2.46)	Minimal	Absent	None
HEI-D	Unaccredited	None	None	None

Key Observations:

- HEI-A's consistent alignment of policy, resource, and implementation resulted in measurable sustainability outcomes.
- HEI-B showed moderate institutional performance but lacked stakeholder-driven initiatives.
- HEI-C and HEI-D suffered from a lack of structure, with no measurable impact or reporting transparency.

6.4 Comparative Synthesis: Synergy Levels

HEI Code	Policy-Resource Synergy Level	Sustainability Maturity
HEI-A	High	Mature
HEI-B	Moderate	Developing

HEI-C	Low	Nascent
HEI-D	Absent	Non-existent

6.5 Summary of Findings

- Institutions with explicit policy frameworks and budget-linked resource planning (e.g., HEI-A) achieved higher sustainability maturity.
- Policy without resource backing (HEI-C) or lack of both (HEI-D) resulted in poor performance.
- Accreditation pressure (NAAC/NBA) appeared to positively influence sustainability behavior.
- Digital infrastructure and public disclosure correlated with stronger governance and stakeholder trust.
- There is no state-level mechanism ensuring policy-resource alignment in private HEIs — reinforcing the need for a unified synergy framework.

7. Discussion & Strategic Recommendations

The findings from the comparative analysis of private HEIs in Uttar Pradesh reveal considerable divergence in institutional capacities to synergize policy with resource management for sustainability. The degree of policy-resource alignment directly influenced sustainability maturity, highlighting a critical structural gap in private HEIs that this study aims to address.

7.1 Interpreting the Synergy Policy-Resource Gaps

A key insight is that the existence of a policy does not guarantee implementation, especially in the absence of dedicated financial, human, and infrastructural support. Institutions like HEI-C had policy statements but no operational mechanisms to support them, whereas HEI-D lacked both policy and implementation. Conversely, HEI-A, which maintained an integrated sustainability strategy with allocated budgets and reporting systems, exemplified the benefits of a synergy-based approach.

These outcomes confirm that sustainability cannot be achieved through fragmented governance. A lack of coordination between policy-making bodies and resource-utilizing departments (finance, HR, operations, ICT) leads to inefficiencies and missed outcomes, especially in autonomous private institutions with limited regulatory oversight.

7.2 Role of Accreditation and External Incentives

The influence of NAAC and NBA accreditation processes was evident. HEIs with higher accreditation scores were more likely to have structured sustainability mechanisms. However, compliance-driven models alone were insufficient to guarantee long-term strategic alignment. There is a need to transform accreditation incentives into continuous improvement tools, reinforcing policy-resource integration beyond just checklists or audits.

7.3 The Governance Challenge in Private HEIs

Most private institutions operate with limited governance capacity, and leadership is often centralized without participatory planning mechanisms. This inhibits cross-departmental synergy, especially in translating sustainability policy into actionable programs. Strategic leadership, therefore, plays a crucial role in fostering an institutional culture of sustainability — one that treats policy and resources as two sides of the same governance coin.

7.4 Strategic Recommendations

Based on the comparative findings, the following strategic recommendations are proposed:

A. Develop Institutional Sustainability Frameworks

Private HEIs should adopt formal frameworks that embed sustainability into strategic planning, budget allocation, HR policies, and operational decisions.

B. Establish Policy–Resource Alignment Cells

Dedicated internal governance units should be created to ensure resource decisions are informed by policy objectives and vice versa.

C. Incentivize Performance through Accreditation Linkages

NAAC/NBA criteria should evolve to reward not only sustainability practices but also evidence of synergy between institutional policy and resource management.

D. Adopt Technology-Enabled Governance Systems

Institutions should invest in ERP and dashboard systems that allow real-time tracking of sustainability indicators and budget-performance linkages.

E. Capacity Building and Stakeholder Engagement

Leadership training, staff orientation, and student-driven sustainability programs should be institutionalized to democratize the policy-resource synergy.

F. Promote Transparency and Public Disclosure

Annual sustainability reporting should become standard practice, enhancing accountability and aligning institutional values with societal expectations.

8. Conclusion

This comparative study highlights the critical role of synergizing institutional policy with resource management frameworks in enhancing sustainability within private Higher Education Institutions (HEIs) in Uttar Pradesh. Through secondary document analysis and benchmarking across multiple HEIs, the research reveals that sustainability maturity is closely tied to how well institutional policies are aligned with resource planning, deployment, and governance mechanisms.

Institutions that demonstrated a high level of synergy — such as clear policy articulation, budget-backed implementation, stakeholder engagement, and performance monitoring — reported significantly better sustainability outcomes. In contrast, HEIs with fragmented or absent frameworks exhibited negligible progress, despite national and accreditation-level mandates for sustainability integration.

The findings emphasize that sustainability is not an outcome of isolated efforts, but of integrated systems-thinking where policy drives resource decisions and resource utilization inform policy evolution. Furthermore, the study suggests that accreditation processes, leadership commitment, and digital infrastructure can serve as critical enablers for institutional transformation.

9. Future Scope

This research opens several avenues for future inquiry and action:

A. Empirical Validation of the Proposed Framework

Future studies may apply the conceptual “Policy–Resource Synergy Framework” in a broader, empirical context through field surveys, interviews, or longitudinal tracking.

B. Statewide or Cross-State Comparative Studies

Expanding the analysis to include public HEIs or HEIs from other states would help validate generalizability and uncover regional variations in policy-resource dynamics.

C. Development of a Policy-Resource Alignment Index (PRAI)

Building a quantifiable index or rubric to assess the degree of synergy across institutions could aid in monitoring and policy reform.

D. Policy Advocacy and Framework Institutionalization

Collaborating with UGC, NAAC, or state education boards to adopt this framework as a policy planning tool could support system-wide reforms in private HEIs.

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