

The Impact of Performance-Based Funding on Higher Education Institutions

Dr. Shakeel Ahmed

dr.shakeel.ahmed2024@gmail.com

Lecturer, Department of Sociology, University of Balochistan, Quetta, Pakistan

Saira Khurram

Roots IVY Educational Complex, Faisalabad

Qurratul ain Leghari

qurrat.leghari@hamdard.edu.pk

Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Hamdard University, Karachi, Pakistan

Dr Bashir Khan

bkhan@hec.gov.pk

In-charge HEDR. HEC, Islamabad

Mehwish Bibi

mehwishbibi001@gmail.com

International Islamic University Islamabad

Corresponding Author: *Dr. Shakeel Ahmed dr.shakeel.ahmed2024@gmail.com

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ABSTRACT

This research evaluates the impact of performance-based funding (PBF) on higher education institutions in Pakistan, employing a mixed-methods framework. The researchers selected 12 universities across four provinces (public and private) on which the Higher Education Commission (HEC) had acted regarding the 2019-2023 PBF implementation policy. The researchers collected and analyzed documents and primary data for the study from 360 university administrators, faculty, and HEC officials through a survey, as well as in-depth and focus group interviews. According to published research output, PBF implementation was reported to increase the graduation rate by 43%, as well as 28% and 35% increases in faculty qualifications. However, the qualitative data collected highlighted issues of compliance, as the PBF facilitators noted a lack of academic autonomy, excessive administrative burden, and institutional gaming. The qualitative data revealed the themes of strategic compliance, sustainability, the trade-off between quality and quantity, resource allocation, and stakeholder opposition. Changes to PBF dictated a positive shift in institutional performance. Thus, policy change should target the periphery to mitigate the unintended adverse effects of PBF on the long-term enhancement of quality within educational institutions.

Keywords: Impact, performance-based funding (PBF), systems, higher education institutions, Pakistan, mixed methods framework, PBF implementation policy.

INTRODUCTION

Performance-based funding systems are becoming a popular trend in higher education worldwide. These systems influence how higher education institutions are funded, how they receive financial resources, and how they are managed. They are constructed using certain elements of an institution's performance. Assessment is based on and linked to the institution's financial disbursement—funding allocated based on

outcomes in research, graduations, or retention. These shifts and policies indicate a movement toward results-oriented funding and a more accountable higher education system (Teixeira, Biscaia et al. 2022).

Performance-based funding systems are deeply embedded in the principles of new public management. They are driving structural adjustments that have developed over the years in education systems globally. For the past three decades, systems and values in education, as well as the balance of performance in funding and research, have diverged in the USA and the UK (Ortagus, Rosinger et al., 2023). For developing countries, using performance-based funding brings opportunities and challenges that differ from those in developed countries. These contexts are shaped by financial constraints, varying institutional capacities, and diverse educational challenges. Poorly developed educational systems face particular risks. Performance-based funding can trigger improvements, but it can also create perverse incentives, exacerbate inequalities, and lead to implementation challenges and inequities in educational integration (Haake and Silander 2021).

Over the past twenty years, Pakistan has experienced unprecedented change in higher education. The Higher Education Commission has consistently made efforts to improve system quality (Ul Hassan, Murtaza et al., 2025). From 2019 to 2023, Pakistan implemented Performance-based Funding in its higher education systems. This period provides a basis for analyzing such a policy from a developing country context. In Pakistan, institutions are heterogeneous, resources are limited, and educational priorities are disparate (Maqsood, Abbas et al. 2021).

Pakistan has over 200 universities enrolling nearly 1.8 million students. University capacities, resources, and performance levels differ greatly. Implementing uniform policies for performance-based funding (PBF) will often be impossible and impractical. For policymakers in Pakistan and international reform analysts, understanding how PBF policies are applied would be a significant advantage (Rehman 2025).

Research on PBF funding in higher education documents highly disparate outcomes. Some studies describe outcomes such as enhanced educational quality, accountability, and performance within and across institutions. Others report system 'gaming,' loss of academic autonomy, and a decline in quality. These mixed outcomes show the need for further research on educational systems and their socio-cultural contexts (Riaz, Jabeen et al. 2023).

As the government in Pakistan turned its focus to higher education, it introduced performance-based funding. This happened during a period of rapid growth and reform in the education sector. From an outcome perspective, this funding method presents both opportunities and challenges. These are especially noticeable in building sustainable institutional quality and capacity. How universities respond to these funding changes helps us understand the impact of performance-based funding. This response also provides valuable input for further refining policy (Ahmad, Zia et al. 2023).

The success of performance-based funding initiatives relies mainly on specific stakeholder groups. University administrators implement funding policies, faculty members adapt teaching and research practices, and policymakers create and oversee regulations. Each group views stakeholder interests through its own lens, shaped by its unique problems and priorities. The degree to which their goals align or conflict influences how performance-based funding is implemented, thereby shaping the strategic and operational actions of higher education institutions (Murtaza and Hui, 2021).

The challenges in evaluating the impact of performance-based funding are clear in this study's design. It combines quantitative analysis of performance indicators with a qualitative study of stakeholder experiences and institutional responses. The research employs an ordered mixed-methods approach to measure outcomes and understand the mechanisms of PBF in higher education in Pakistan (Tunio, Unar et al., 2021).

This piece contributes to the international literature on performance-based funding, with a focus on developing countries. It describes expected and unintended consequences of PBF in Pakistan. It also provides critical policy suggestions and outlines the necessary conditions for PBF to be effective in various educational systems.

Research Objectives

1. To determine the effect of performance-based funding on the institutional performance metrics of higher education institutions in Pakistan, particularly on research output, graduation rates, faculty qualifications, infrastructure development, and financial sustainability from the years 2019-2023.
2. Evaluate stakeholder views and university responses to performance-based funding and its implementation.
3. To determine the adverse effects of performance-based funding in Pakistani higher education: system manipulation, loss of sovereignty, lower standards, and mission misalignment.

Research Questions

1. What changes have occurred in institutional performance metrics with the implementation of performance-based funding policies on Pakistani higher education institutions from 2019 to 2023?
2. How do university administrators, faculty members, and policymakers perceive the effectiveness and relevance of the core mechanisms of performance-based funding in Pakistan's higher education sector?
3. What forms of system manipulation and unintended adverse effects have emerged due to PBF policies, and what strategic countermeasures have institutions in Pakistan adopted to mitigate such effects?

Significance of the Study

This study contributes to the higher education sector in Pakistan by being the first to investigate the impact of performance-based funding policies on higher education, offering important insights to other developing countries that are introducing similar policy reforms. While the study's methodology enables the rich account of stakeholders' experiences with the PBF policies to be analyzed through a mixed-methods approach anchored in fieldwork, it situates the performance-based funding policies within the literature developed by the study. This resource is designed for international scholars to expand the literature on performance-based funding, and it also serves as a starting point for enhancing funding for higher education in Pakistan. The current work contributes to the PBF literature by developing contexts, while also acknowledging the challenges of resource allocation and clusters of institutions. Since the study examines several stakeholders, the suggested policies appear to address the stark realities of higher education policy, thereby aiming to assess the relevance of the study for subsequent efforts in implementation and policy development.

LITERATURE REVIEW

Performance-based funding in higher education stems from public management reforms that emphasize accountability, efficiency, and results (Mizrahi, 2021). The first such systems began in the 1980s and 1990s. These systems emerged in response to political pressure for public educational institutions to demonstrate the value of public funds while maintaining high-quality and accessible education (Lawrence and Rezai-Rashti 2022). PBF systems utilize principal-agent theory, which posits that linking funding to

performance motivates institutions to achieve policy objectives. However, critics argue that education outcomes are too complex for simple, metric-driven systems (Kallio et al., 2022).

Building on this theoretical background, the design, execution, and consequences of international performance-based funding (PBF) systems vary significantly by region and even within individual educational systems. For instance, Tennessee is often cited as a pioneering model for state funding, with allocations based in part on each institution's performance on criteria such as graduation rates, research, and student educational outcomes. In contrast, Germany and the Netherlands have more finely tuned systems that add performance incentives and also address academic self-governance and educational diversity. These systems together outline the contexts for PPF effectiveness (Mombou 2024).

Critics argue that the research underlying performance-based funding (PBF) in education lacks solid evidence regarding its impact on performance and educational quality (Rasool, Qian et al., 2022). Studies on Tennessee and Ohio, both of which adopted PBF policies and saw record-high graduation rates, take place within a complex landscape of educational policies with varied outcomes. However, negative consequences for educational quality and equity persist, and concerns that the system has been 'gamed' remain unexamined. As a result, evidence about the effects of PBF on institutional performance remains vague and inconclusive (Rosinger, Ortagus et al. 2022).

In funding systems tied to performance metrics, organizations are often described as 'gaming' the system. This means they meet the metrics without adding real value to education or improving outcomes (Saqlain and Shahid 2024). Common approaches include grade inflation, selective admissions, setting easily met standards, or focusing resources on outcomes that are simple to measure, while the core educational mission is often ignored. Research in diverse and multicultural areas shows that 'gaming' is common and carries risks. Still, the design of the metrics and the organization's culture are the main factors that influence the outcome (Han and Benton 2025).

Perceptions of performance-based funding differ among university stakeholders. These include administrators, faculty, students, and state agents (Aslam et al., 2025). Administrators see PBF as a tool for change and accountability. Faculty view it as a potential violation of their academic freedom, an added administrative burden, and a threat to teaching and research. These different perceptions may compromise the potential success of PBF. They highlight the need for stakeholder collaboration in the design and implementation of PBF (Zerquera and Torres, 2025).

It is also interesting to study the effects of performance-based funding (PBF) on institutional governance and strategic planning. When a higher education institution is in a PBF system, it evolves its internal processes. These include internal resource allocation and the rating and tracking of staff performance. These systems work to manage external funds. PBF system innovations drive institutional accountability and efficiency, but they also have downsides. These include institutional rigidity, bureaucratic control, and a loss of flexibility to innovate. The institution can become inflexible and shut down innovation. It may become a bureaucratic entity, focusing on administering educational tasks rather than engaging in its educational mission (Sivertsen 2023).

There is little work on PBF in higher education systems in the developing world. In cases such as South Africa, Chile, and Malaysia, implementing PBF is closely tied to governance frameworks, institutional capacity, and PBF adoption, as evidenced by their mixed results. The need for local adaptation to global best practices is evident. All cases underscore the importance of institutional capacity and stakeholder preparedness. They highlight the importance of the education system's development focus and the emphasis required in the design and implementation of PBF (Tewe, 2022).

Research is crucial for understanding the impact of performance-based funding on educational equity. While such funding systems can widen equity gaps and disadvantage institutions with low-income, first-generation, or academically underprepared students, research evidence remains ambiguous. Some studies find little impact on equity, whereas others highlight increasing inequalities, or "stratification," in higher education (Brollo, Ibarra et al. 2024).

Financial sustainability issues with performance-based funding systems differ from those of other funding mechanisms (Aslam, Aslam et al. 2025). These systems aim to improve outcomes and efficiency, but they can put institutions that fail to meet performance targets under serious financial strain. As a result, performance-based funding may not achieve its intended goals. It can also threaten a university's ability to maintain quality and autonomy over the long term. To reduce these negative financial effects, research recommends establishing a "sufficient baseline" and using "transition" periods when designing performance-based funding (Hall 2023).

Further research examines how performance metrics affect institutional behavior within performance-based funding systems. This includes how metrics are chosen, weighted, and changed. Some studies show institutions avoid educational functions that are not measured. This creates an "unbalanced" situation. Research suggests that performance metrics should be comprehensive and reflect the full institutional mission and goals (Stripling 2025).

Research on the effects of PBF on higher education now encompasses longer timeframes and emphasizes systemic, rather than just short-term, impacts (Saqlain and Shahid, 2024). Numerous studies suggest that PBF can foster lasting changes in institutional culture, academic practices, and state-university relations. These changes do not necessarily center on the intended outcomes of performance enhancement. Understanding such systemic shifts is crucial for evaluating the overall impact of PBF as a policy tool (Li and Hu, 2025).

Performance-based funding (PBF) programs interact with various higher education policies, which complicates the evaluation of the impacts of PBF. Universities face multiple accountability frameworks, funding models, and governance structures that both promote and limit PBF. The limited literature on PBF's relationship with other policies notes that coherent, interconnected approaches are vital for PBF's effectiveness and that moving beyond isolated funding changes is necessary (Levatino, Verger et al. 2024).

RESEARCH METHODOLOGY

The researchers used a mixed-methods design to examine performance-based funding in higher education institutions in Pakistan. Fieldwork took place at twelve universities across Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan. Both private and public dual-benchmark institutions were included in the study. These were accredited under performance-based funding policies from 2019 to 2023, set by the Pakistan Higher Education Commission (HEC). The study used stratified random sampling to select research subjects. In total, 360 key stakeholder allocators participated: 180 university executives (vice chancellors, registrars, finance directors, and department heads), 120 academics from various disciplines, and 60 HEC officials who funded policies and contracts. Data was collected over ten months through surveys and ethnographic methods. Researchers analyzed institutional performance documents, including financial records, policies, and reports, to assess the effectiveness of the institution. They also conducted in-depth interviews and FGDs to assess stakeholder perceptions and policy impacts. For the quantitative analysis, researchers assessed research output, graduation rates, faculty qualifications, infrastructure growth, financial sustainability, and other performance indicators. They examined shifts in these indicators before and after the introduction of performance funding. Qualitative analysis explored performance funding strategies, challenges posed by HEC, unintended consequences, and stakeholder

perceptions. Quantitative data were analyzed using regression, descriptive statistics, and ANOVA in SPSS. Qualitative data underwent thematic analysis in NVivo. All participating universities and the Higher Education Commission provided ethical approval and assurances of confidentiality for the data and participant responses throughout the study.

RESULTS AND DATA ANALYSIS

Quantitative Analysis

The quantitative analysis examined five key performance indicators across twelve universities from 2019 to 2023. Data was collected through structured questionnaires and institutional records. Statistical analysis was performed using SPSS, employing descriptive statistics, regression analysis, and ANOVA to assess the significance of changes following PBF implementation.

Table 1: Research Output Changes (2019-2023)

Institution Type	Pre-PBF (2019-2020)	Post-PBF (2021-2023)	Percentage Change	p-value
Public Universities	1,247 publications	1,892 publications	+51.7%	<0.001
Private Universities	634 publications	856 publications	+35.0%	<0.05
Combined Total	1,881 publications	2,748 publications	+46.1%	<0.001

Research output demonstrated significant improvements across all participating institutions following the implementation of performance-based funding. Notably, public universities showed the most substantial gains with a 51.7% increase in total publications, while private institutions recorded a 35.0% improvement. Taken together, the combined increase of 46.1% was statistically significant ($p < 0.001$), indicating that PBF mechanisms successfully incentivized research productivity. Nevertheless, qualitative interviews revealed concerns about publication quality, as some institutions prioritized quantity over impact to meet performance targets.

Table 2: Graduation Rate Improvements (2019-2023)

Program Level	Pre-PBF Rate	Post-PBF Rate	Improvement	Statistical Significance
Undergraduate	67.3%	86.1%	+18.8%	$p < 0.001$
Master's	71.8%	89.4%	+17.6%	$p < 0.001$
Doctoral	58.2%	76.9%	+18.7%	$p < 0.01$
Overall Average	65.8%	84.1%	+18.3%	$p < 0.001$

Graduation rates across all program levels demonstrated statistically significant improvements following the implementation of PBF. Specifically, the overall average graduation rate increased from 65.8% to 84.1%, representing an improvement of 18.3%. While undergraduate programs demonstrated the largest absolute gains, doctoral programs showed proportionally similar improvements. Taken together, these results suggest that performance-based funding successfully motivated institutions to focus on student completion. However, focus group discussions revealed concerns about potential grade inflation and reduced academic rigor as unintended consequences, highlighting areas requiring ongoing attention.

Table 3: Faculty Qualification Enhancement (2019-2023)

Qualification Level	2019 Numbers	2023 Numbers	Change	Percentage Increase
PhD Faculty	2,847	3,842	+995	+34.9%
Master's Faculty	1,923	1,456	-467	-24.3%
Faculty with International Training	456	789	+333	+73.0%

Research-Active Faculty	1,234	1,967	+733	+59.4%
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Faculty qualification improvements were among the most pronounced changes observed during the study period. Notably, the number of PhD-qualified faculty increased by 34.9%, while faculty with international training showed a remarkable growth of 73.0%. Additionally, the number of research-active faculty members grew by 59.4%, indicating the successful incentivization of scholarly activities. However, the decrease in Master's-level faculty reflects institutional upgrading policies tied to PBF requirements, although interviews revealed concerns about recruitment challenges and increased salary pressures.

Table 4: Infrastructure Development Investment (2019-2023)

Infrastructure Category	Pre-PBF Investment (PKR Millions)	Post-PBF Investment (PKR Millions)	Increase	Percentage Growth
Library Resources	234.7	398.2	+163.5	+69.7%
Laboratory Equipment	567.3	892.6	+325.3	+57.3%
IT Infrastructure	189.4	347.8	+158.4	+83.6%
Research Facilities	145.6	267.9	+122.3	+84.0%
Total Infrastructure	1,137.0	1,906.5	+769.5	+67.7%

Infrastructure development showed substantial increases across all categories, with total investment growing by 67.7% during the post-PBF period. Research facilities and IT infrastructure demonstrated the highest percentage growth at 84.0% and 83.6% respectively, reflecting institutional priorities aligned with PBF performance indicators. Library resources and laboratory equipment also received significant investment increases. However, document analysis revealed that some institutions faced challenges in maintaining and fully utilizing these expanded facilities, primarily due to shortages of skilled personnel and insufficient provision for ongoing maintenance.

Table 5: Financial Sustainability Indicators (2019-2023)

Financial Metric	Pre-PBF Average	Post-PBF Average	Change	Significance Level
Cost per Student (PKR)	287,450	324,680	+13.0%	p<0.05
Revenue per Student (PKR)	315,230	389,740	+23.6%	p<0.001
Operating Margin (%)	8.8%	16.7%	+7.9pp	p<0.001
External Grant Success Rate	23.4%	41.2%	+76.1%	p<0.001

Financial sustainability metrics revealed mixed but generally positive trends following PBF implementation. For example, operating margins improved significantly from 8.8% to 16.7%, indicating enhanced financial efficiency. Furthermore, external grant success rates nearly doubled, indicating an improvement in institutional capacity for acquiring competitive funding. However, despite these positive indicators, the cost per student increased by 13.0%, raising questions about long-term affordability and accessibility. In addition, although improvements in the revenue diversification index reflected successful efforts to reduce dependence on government funding, some institutions expressed concerns about maintaining educational accessibility amid increased revenue pressures.

Qualitative Analysis

The qualitative aspect of this study involved thematic analysis through NVivo on data collected from 45 in-depth interviews, 12 focus group discussions, and comprehensive document analysis. From the

qualitative data, five themes emerged regarding the intricate institutional responses and the unintended consequences of the PBF.

Theme 1: Strategic Adaptation and Organizational Change

With the PBF requirements, universities were able to reorganize their operations. They created new performance monitoring units, revised promotion and tenure requirements to include measurable outputs, and established internal performance resource allocation systems. One public vice chancellor put it this way: "We had to completely reimagine our strategic planning process to focus on metrics that matter for funding." These adaptations increased bureaucratic controls, reduced the academy's focus on its intrinsic goals, heightened faculty discontent, and led to greater competition in classroom practices, thereby constraining curriculum autonomy.

Informal designations, structures, order, culture, and daily customs changed as a result of the institution's reorganization. The restructuring introduced more complex data collection and performance evaluation systems, resulting in increased administrative work for university staff. Administrators noted that these performance evaluations and reports consumed approximately one-third of their time. These requirements caused tension by shifting staff focus toward documenting results and meeting performance metrics. Although institutions became more adept at managing performance data, this did not reduce the administrative burden; instead, it helped maintain academic freedom for staff.

Theme 2: Resource Allocation Challenges and Institutional Inequities

Performance-based funding highlights how institutions differ in their ability to adapt to new demands. Older institutions have more developed faculties, research, and scholarly competencies. These have helped them advance performance metrics with relative ease. Newer, less resourced institutions find it more difficult to do so, due to issues of competitive parity. A registrar from a private university reflected on this systemic inequity: "The playing field isn't level — institutions with strong foundations benefit most from PBF while others fall further behind."

Within universities, resource allocation decisions have become more conflictual and restricted by performance-driven goals. Internal departments now compete more directly for funding. Hoarding research funds and support for a range of educational offerings is a systemic norm. STEM disciplines have a strong position in both funding and research output. Meanwhile, the humanities and social sciences often endure funding shortages. The concerns described are, and remain, justified.

Theme 3: Quality versus Quantity Tensions

A central tension revealed in the qualitative analysis was the dominance of performance metrics focused on research quantity over quality. Faculty, across several institutions, pointed to a problematic trade-off: the pressure to increase publication counts undermines the quality and integrity of research. One senior faculty member summarized this concern: "The system rewards quantity, but our real mission should be about quality and meaningful contributions to knowledge."

Comparable tensions surround student outcomes, especially regarding institutional efforts to raise graduation rates. Multiple focus groups described a culture of grade inflation, noting that faculty are pressured to retain failing students to protect performance metrics. In the context of PBF metrics, these issues challenge the balance between educational quality and institutional demands.

Theme 4: Stakeholder Resistance and Implementation Challenges

Differing stakeholder positions manifested as some resistance to implementing PBF. Faculty members feared increased workloads and threats to their academic autonomy. They also expressed concerns about

the commodification of education. One focus group member summed up their frustrations: "We became accountants instead of educators, constantly calculating our contributions to institutional metrics."

Competing priorities affected the development and maintenance of systems and processes. Administrative staff also experienced challenges. Confusion, frustration, and system breakdowns followed. The organization's ability to adapt was overwhelmed by the rapid implementation of PBF. HEC officials acknowledged the operational challenges. However, the accountability structures within PBF and the funding it controls remained central concerns.

Theme 5: Sustainability Concerns and Long-term Impact

Across stakeholder groups and implementation phases, the long-term sustainability of PBF became a predominant concern. Key concerns included whether initial improvements in performance driven by a focus on metrics would be sustained over time. Administrators specifically highlighted the risk of "metric fatigue," where performance could plateau as institutions exhaust process optimization options, leading to diminishing returns.

Concerns about financial sustainability have been particularly prevalent in smaller institutions. Specifically, these institutions face challenges in securing adequate funding and maintaining long-term operations due to difficulties competing within the PBF mechanisms. The competitive, almost adversarial, nature of the PBF system has resulted in clear winners and losers, raising issues about its inequitable and inconsistent treatment of institutions. One finance director noted, "Short-term gains are encouraging, but we need to think carefully about whether this model serves our long-term educational objectives."

On the positive side, qualitatively oriented analyses also noted several unintended, positive consequences of PBF in institutions. The ability to collect and analyze data helped institutions develop self-awareness and aid strategic planning. The focus on outcomes resulted in more permanent and refined student support services. It also prompted more robust, meaningful academic advising. The amplified focus on research, even if driven primarily by outputs and quantitative measures, has opened up opportunities for international research collaboration. It enhanced the institution's global reputation.

DISCUSSION

This study examines the diverse impacts of performance-based funding (PBF) on the Pakistani educational system. It highlights both measurable benefits—such as a 46.1% increase in research outputs, an 18.3% rise in graduation rates, improved faculty qualifications, and upgrades to educational infrastructure—and significant implementation challenges and unintended consequences. The main argument is that while PBF policies contribute positively to institutional reforms and accountability, these benefits are accompanied by complex challenges that must be addressed.

In contrast to the quantitative benefits, qualitative findings introduce the main concern of this study: that the large-scale improvements of PBF may lack real value and sustainability. Key challenges include game-playing, heightened administrative burdens, and trade-offs that affect the true value of outputs. The argument here is that the effective implementation of PBF policies requires nuanced planning, particularly in terms of stakeholder engagement during policy changes, which is often insufficiently addressed.

The findings highlight a central argument: although Pakistan's experience with PBF appears quantitatively positive, these gains are complicated by qualitative concerns, including metric validity, academic autonomy, and equity. The study argues that careful policy design and revision are necessary to leverage the benefits of PBF while avoiding negative unintended outcomes, as echoed in global literature.

CONCLUSION

This study examines performance-based funding systems in Pakistani higher education, highlighting both their advantages and the challenges they present. The core argument is that while integrating funding with performance metrics prompts institutions to meet performance expectations, it also yields unforeseen outcomes, underscoring the need for a thoughtful policy response.

The main argument is that quantitative data demonstrates how performance-based funding (PBF) correlates with institutional improvements in research outputs, graduation rates, faculty adequacy, and infrastructure. However, these improvements prompt questions about the scale, sustainability, and effectiveness of the PB funding model as currently implemented.

Qualitative data support the main argument by showing that while performance funding can promote improvements, unintended consequences such as gaming and resistance can undermine genuine progress. Therefore, the effectiveness of PBF depends on clear accountability metrics, aligned stakeholders, and policy design preventing superficial gains.

Overall, the study argues that ongoing policy adaptation is critical for successful performance-based funding. Experiences from Pakistan indicate that PBF can enhance accountability and institutional performance, but only if implementation challenges and stakeholder concerns are addressed. These lessons should guide future policy design to maximize positive impacts and minimize drawbacks.

RECOMMENDATIONS

This study identifies four key recommendations for enhancing PBF policies and their implementation in Pakistan's higher education system. First, refine PBF metrics to achieve a balance between quantity and quality of outcomes, rather than focusing only on easily measured results. Include metrics that capture research quality, quality of education, long-term student success, and other complex measures of achievement. Second, ensure that implementation of PBF policies always includes structured Change Management and involves broad stakeholder engagement. Prepare for resistance and prioritize building institutional capability to support effective implementation. Third, PBF policymakers should prioritize addressing inequity across institutions by considering institutional diversity, baseline capacity differences, and equity challenges in their policy design. Fourth, in lower-tier education, shift policy goals, adapt implementation approaches, and plan for regular review and adjustment to meet evolving needs.

Additionally, institutions need technical assistance and capacity building to address educational quality gaps caused by PBF and to develop strategies that better align with PBF policies. The strategic implementation of these recommendations is expected to enhance the effectiveness of performance-based funding and address the issues discussed in this study.

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