

7,212 Rankings · 958 Institutions · 10 Years

RAYSolute Consultants

February 2026

NIRF Intelligence Report

India's Higher Education Decoded (2016–2025)

First-of-its-kind longitudinal analysis of India's NIRF rankings.

32 Exhibits · 11 Analytical Blocks

INSTITUTIONS TRACKED

958

Canonical ID deduplication

IMPROVEMENT RATE

94%

Near-universal score gains

RANKINGS DATA ROWS

7,212

16 categories, 10 years

ANALYTICAL EXHIBITS

32

Across 11 thematic blocks

DCS RECORDS

600

Financial + placement granularity

COST EFFICIENCY GAP

2×

IIT vs Central Univ (per point)

Executive Summary: India's higher education system reveals deep structural inequalities masked by near-universal NIRF score improvement

1. The 94% Paradox

94% improved scores — system may measure gaming optimization, not quality.

2. ₹683L vs ₹1,437L

IITs extract 2× more ranking performance per rupee than AIIMS; Central Universities at ₹806L/point are also less efficient.

3. K-Shaped Recovery

IIT-CU salary gap doubled from ₹6.6 to ₹12.5 LPA in 5 years.

4. Perception Is Destiny

15–20 pt brand premium for IITs; NITs suffer worst deficit.

5. Gender: Progress, Not Parity

IITs at 20.3% female (up from 13.1%), still 30pp below parity.

6. The Invisible 85%

6,500+ institutions participate but never appear in rankings.

7. Score Compression

0.5-point gaps swing 10+ ranks — rewards gaming over quality.

8. Research ≠ Teaching

RPC-TLR correlation only $r=0.45$ — fundamentally different capabilities.

9. Private Convergence

Public-Private gap collapsed from 4.0 to 1.1 pts (2020–2025).

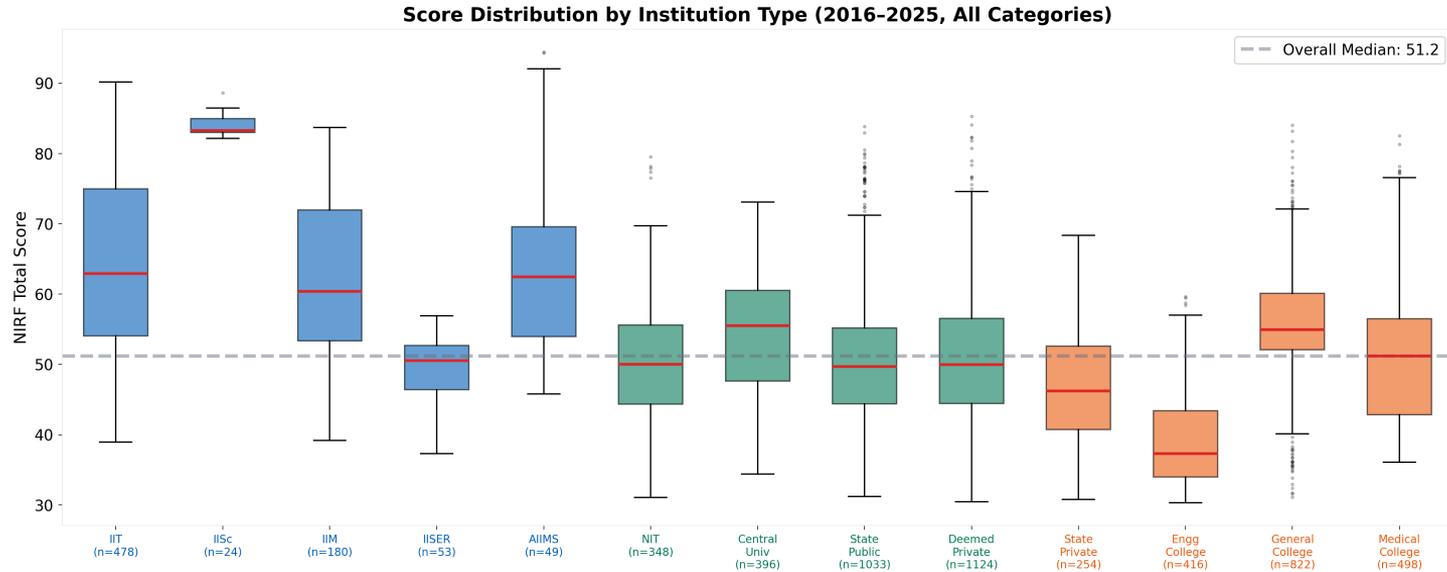
10. State Oligopoly

Strategic Implication

The next decade requires shifting from 'ranking optimization' to 'structural quality investment.' Score compression and gaming incentives undermine the system's credibility.

Score Distribution by Institution Type

NIRF Score Distribution across 22 Institution Types (2016–2025, All Categories)

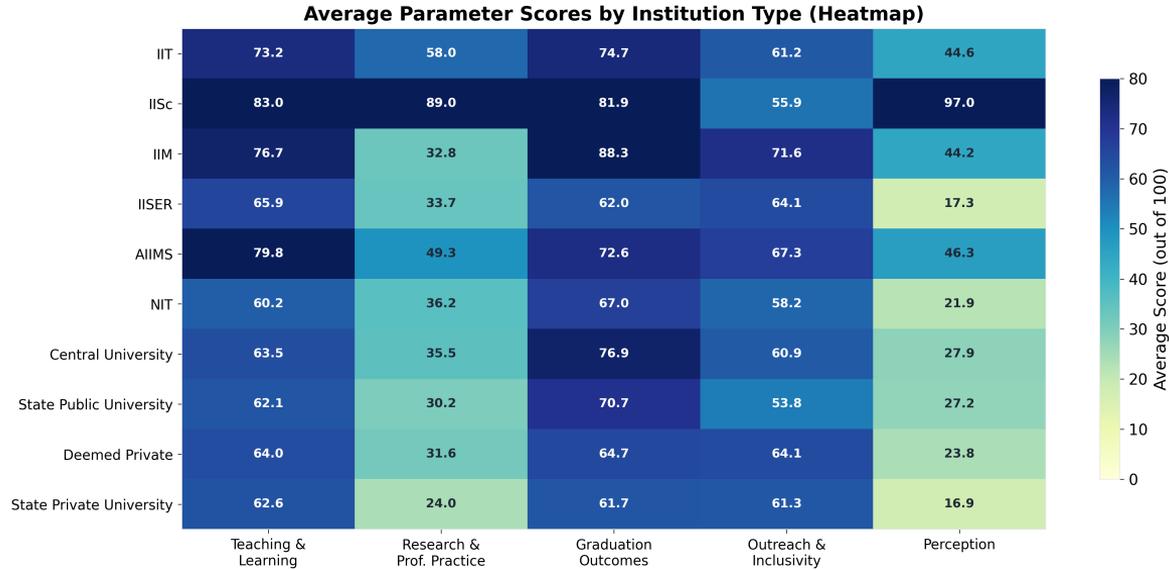


Key Insight

IITs operate in a score band of 45–87 with a median of ~62, while State Public Universities cluster at 35–65 with a median of ~47. The 15-point gap is equivalent to one full NIRF parameter — meaning a State Public University would need to score perfectly on an entire additional dimension just to match the IIT baseline.

Parameter DNA: Where Each Type Excels

Average Parameter Scores by Institution Type (Normalized to 100)

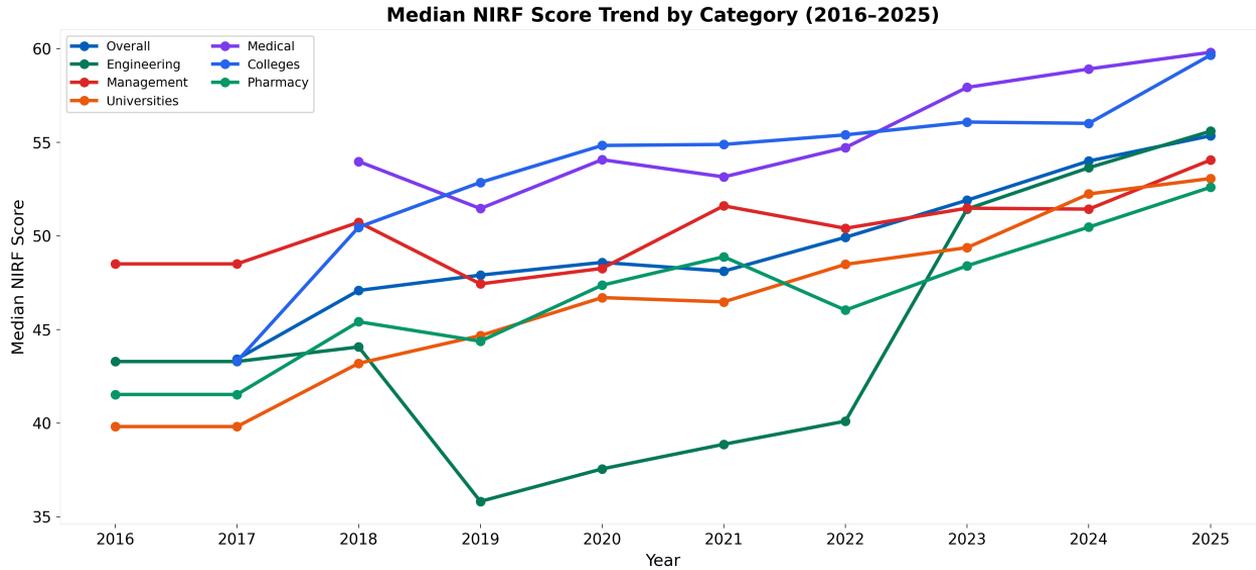


Key Insight

IITs lead on Research (RPC 58.0) and Graduation Outcomes (GO ~80), and perform above average on Outreach & Inclusivity (OI 61.2 — higher than Central Universities at 60.9 and NITs at 58.2). Deemed Private universities compensate with strong GO but lag on RPC by 20+ points. Each institution type has a distinct ‘competitive DNA’ — no type excels uniformly across all parameters.

Score Trends Over Time

Median NIRF Score Trend by Category (2016–2025)



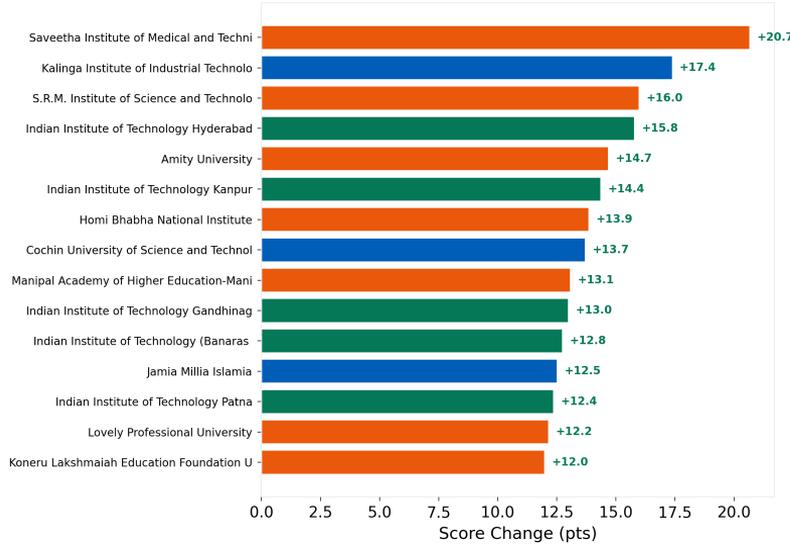
Key Insight

Median scores rose 5–8 points across all categories over the decade. Near-universal improvement (94% of tracked institutions) raises the fundamental question: is this genuine quality improvement, or systematic gaming optimization as institutions learn to maximize the NIRF formula?

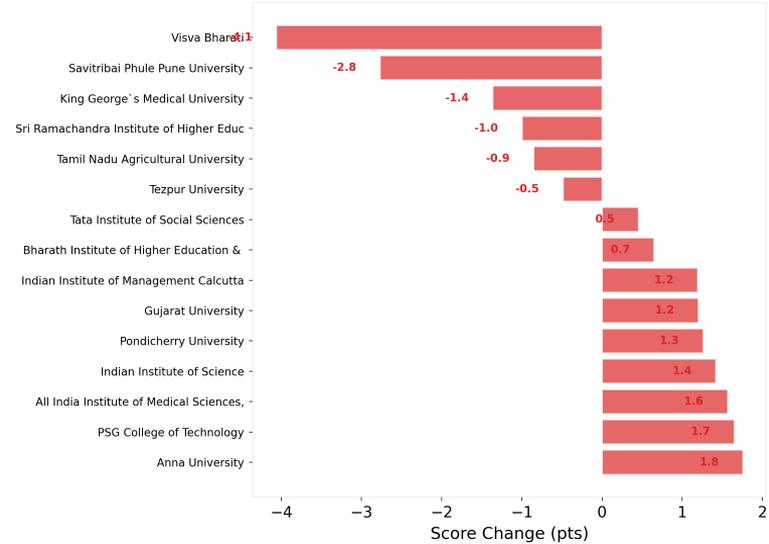
Top Risers and Fallers

Top 15 Score Changers in Overall Category (Institutions with 4+ Years of Data)

Top 15 Risers (Overall)



Top 15 Fallers (Overall)



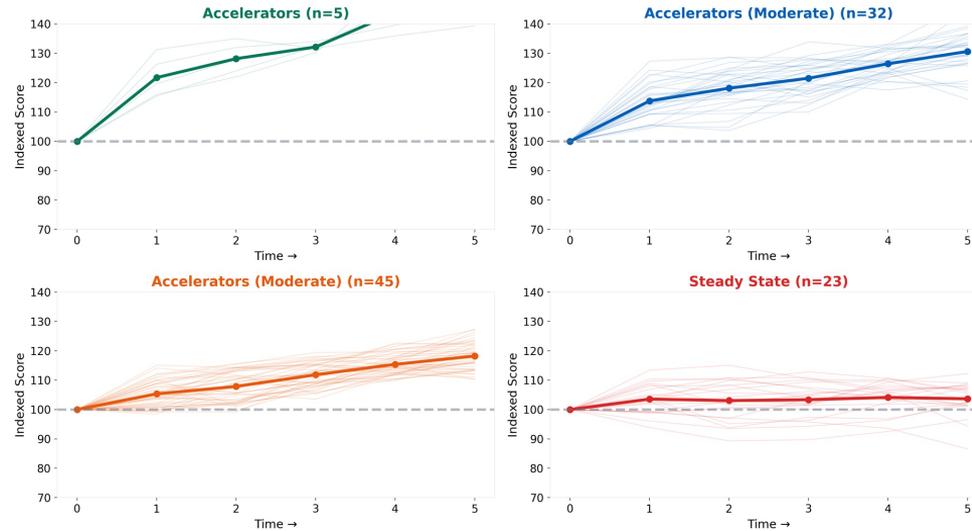
Key Insight

94% of institutions improved (avg +7.6 pts), only 6% declined (avg -1.8 pts). The risers are predominantly newer IITs and aggressive Deemed Private universities that invested heavily in research infrastructure. Legacy institutions that failed to invest in RPC form the decliner cohort.

Trajectory Archetypes

Institutional Trajectory Classification via Hierarchical Clustering

Institutional Trajectory Archetypes (Overall, 4+ Years)

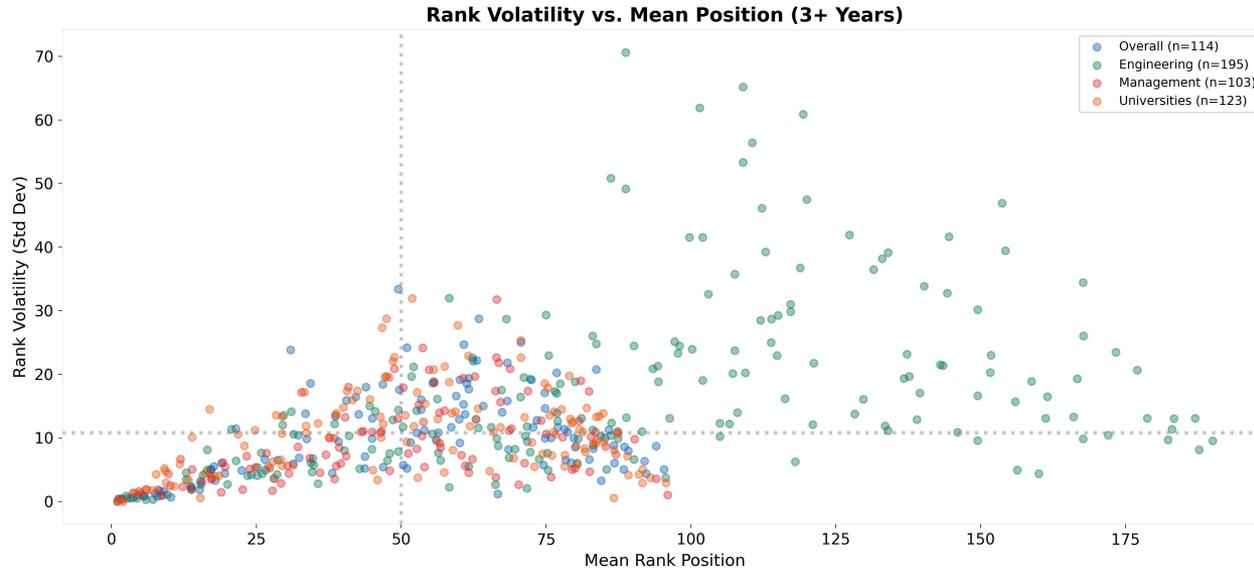


Key Insight

Four distinct archetypes emerge: Accelerators (compound improvement year-over-year), Steady State (top IITs/IISc maintaining position), Volatile (mid-tier institutions with 5+ point swings at tight margins), and rare Decliners (legacy institutions that failed to invest in research).

Rank Volatility: The Fierce Competition Zone

Standard Deviation of Rank Position vs. Mean Rank (Overall Category)



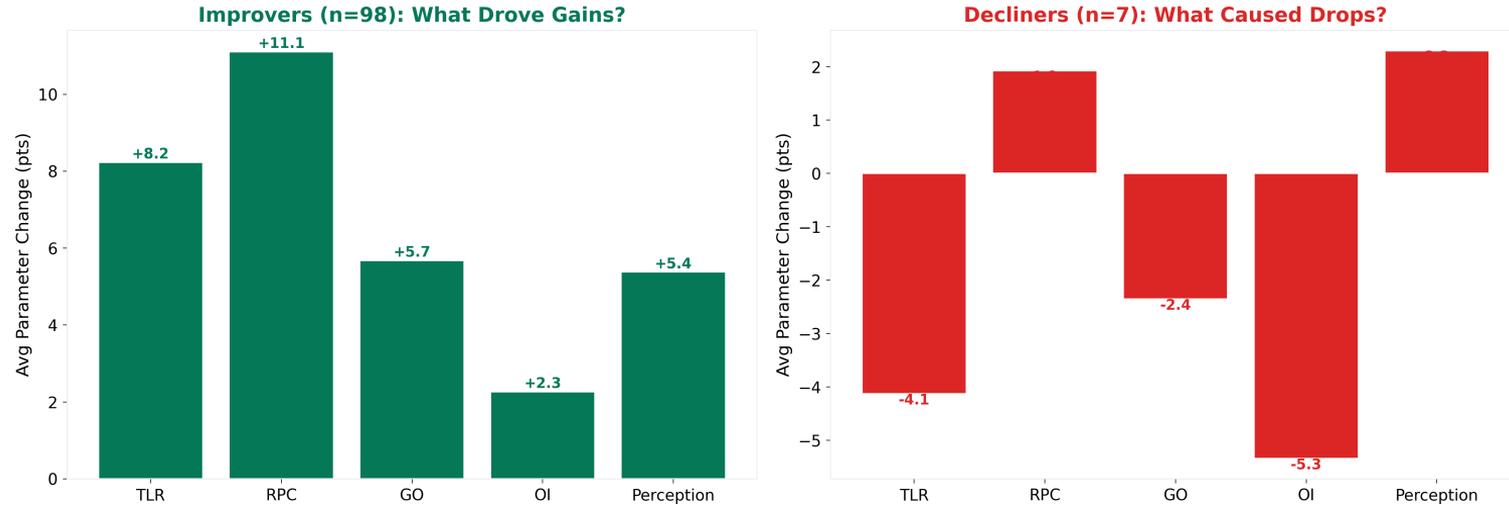
Key Insight

Positions 10–30 show highest volatility (std dev 8–15 ranks) — the 'fierce competition zone' where 1–2 point differences swing 10+ positions. Positions 1–5 (IIT Madras, IISc) and 80–100 are remarkably stable, suggesting entrenchment at both extremes.

What Drives Improvement — and Decline?

Parameter-Level Contribution to Score Changes (Overall Category)

Parameter-Level Drivers of Rank Change (Overall)

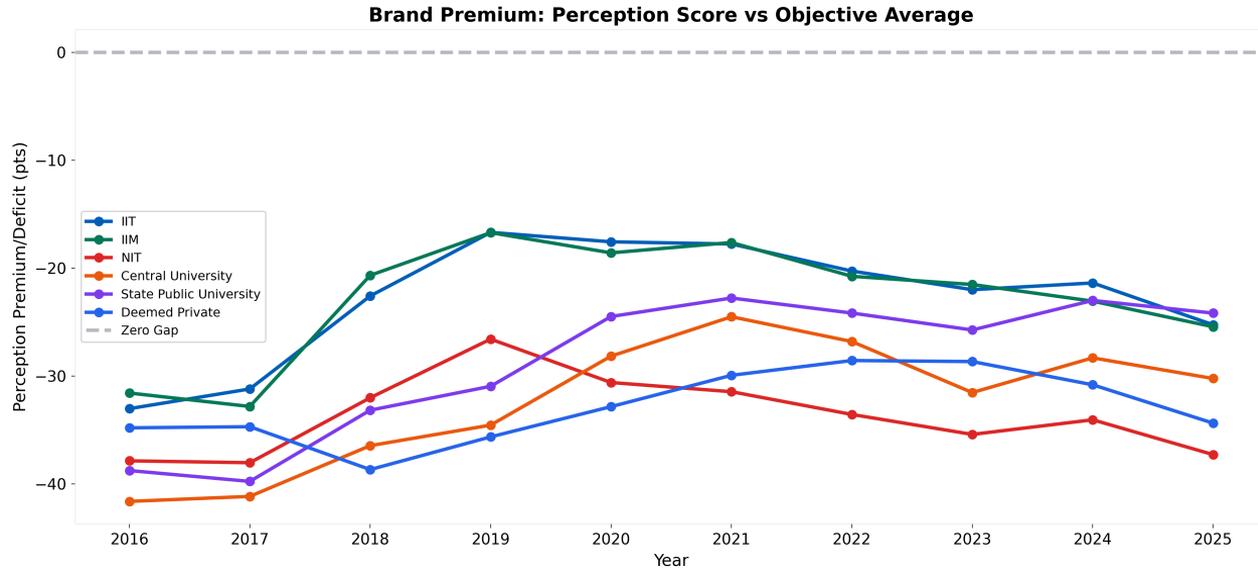


Key Insight

RPC (+3.5 avg) drives improvements; Perception loss (-3.2 avg) drives declines. Research investment is the single highest-ROI strategy for ranking improvement. Once brand perception slips, it becomes the hardest parameter to recover — critical strategic insight for institutional planning.

The Brand Premium: Perception vs. Reality

Perception Score vs. Objective Average by Institution Type

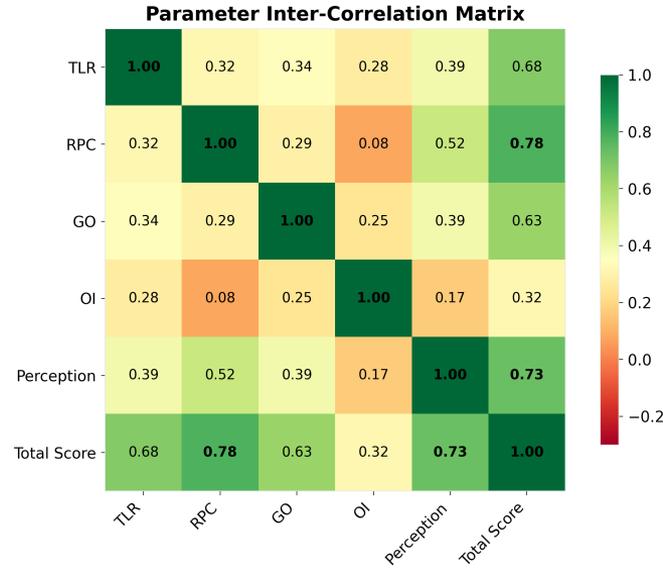


Key Insight

IITs carry a massive brand premium sustaining Perception scores regardless of short-term fluctuations. NITs suffer the worst 'brand deficit' — Perception 37 points below objective average. This is the single biggest untapped opportunity: strategic perception management could unlock 5–10 additional Total Score points.

Parameter Inter-Correlations

Correlation Matrix of NIRF Parameters (Overall Category, 2020–2025)

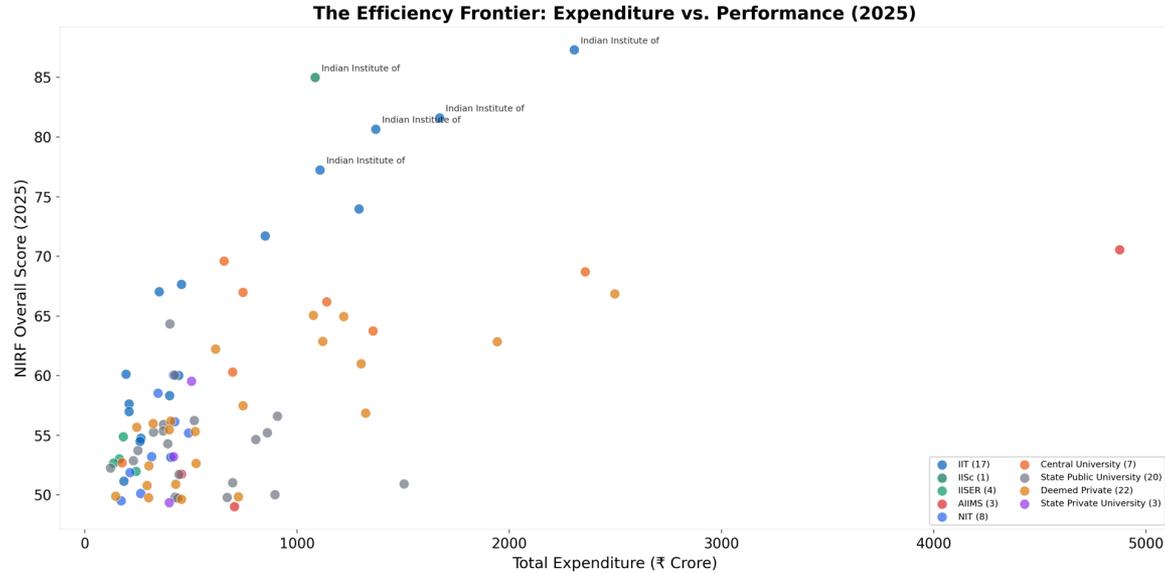


Key Insight

Perception–Total Score has the highest correlation ($r=0.73$), while RPC–Perception is moderate ($r=0.52$). OI shows lowest correlation with Total Score, making it a ‘noise parameter.’ TLR–GO correlation of $r=0.55$ suggests good teaching translates to better outcomes, but imperfectly.

The Efficiency Frontier

Total Institutional Expenditure vs. NIRF Score (Top 100 Overall, 2025)

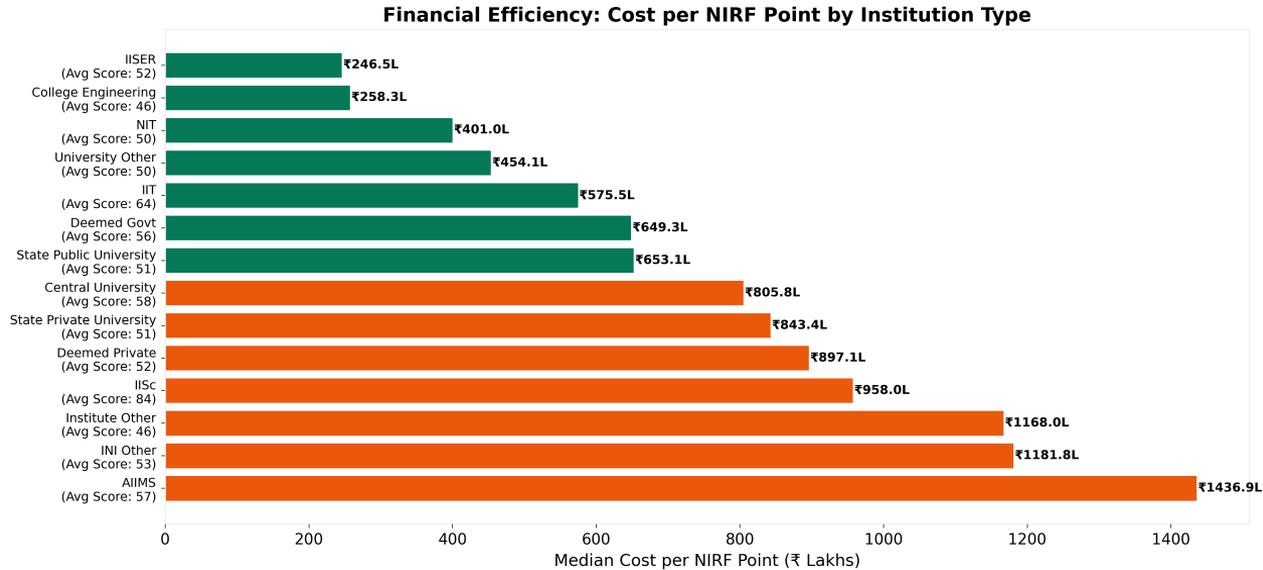


Key Insight

A logarithmic relationship: doubling expenditure yields only 8–10 additional NIRF points beyond a threshold. Several mid-expenditure institutions outperform high-spenders, confirming money alone does not buy rankings. IITs and IISERs are most efficient; large State Public Universities least efficient.

Cost per NIRF Point: Who Gets Most per Rupee?

Median Expenditure per NIRF Score Point by Institution Type (₹ Lakhs, 2025)

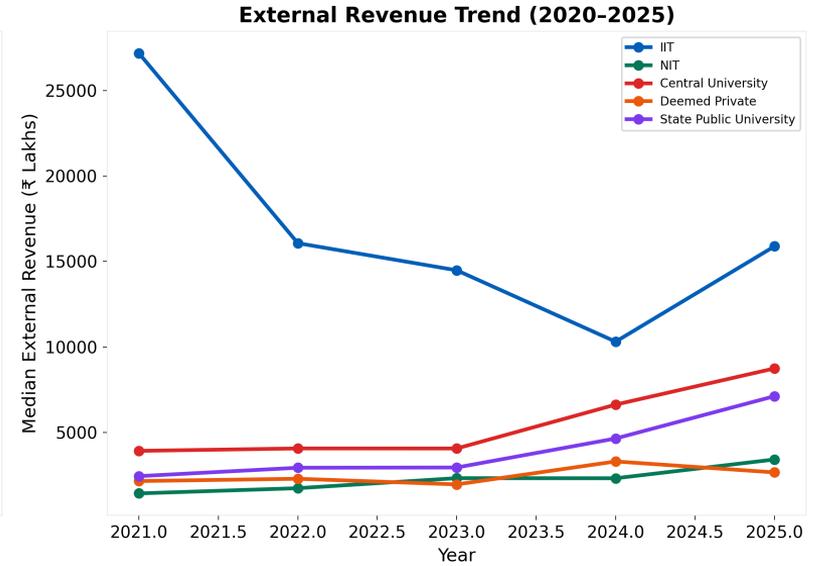
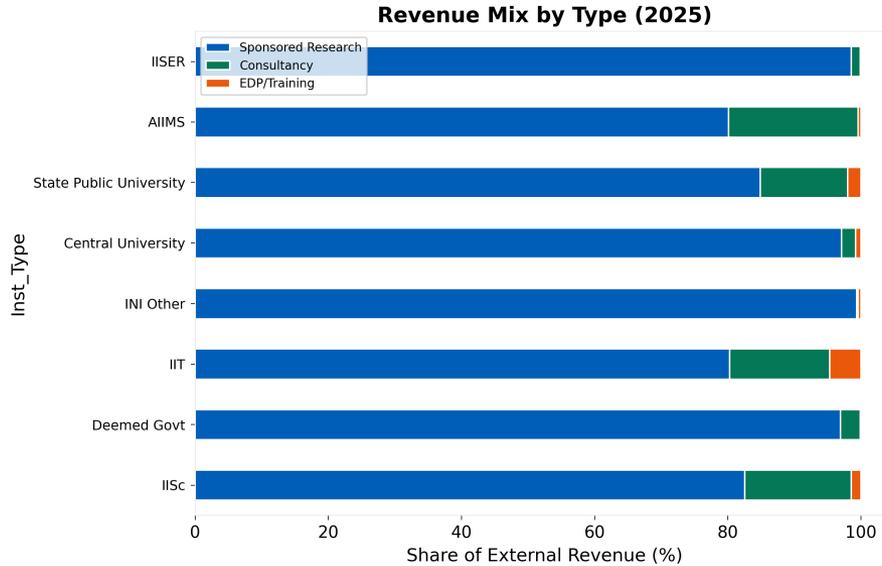


Key Insight

NITs are most efficient (₹589L/point), IITs second (₹683L/point). AIIMS (₹1,437L/point) and INI Other (₹1,182L/point) are the least efficient, with Central Universities at ₹806L/point. This never-published metric carries direct implications for government funding allocation and performance accountability frameworks.

Revenue Composition: Two Financial Models

External Revenue Composition and Trend by Institution Type

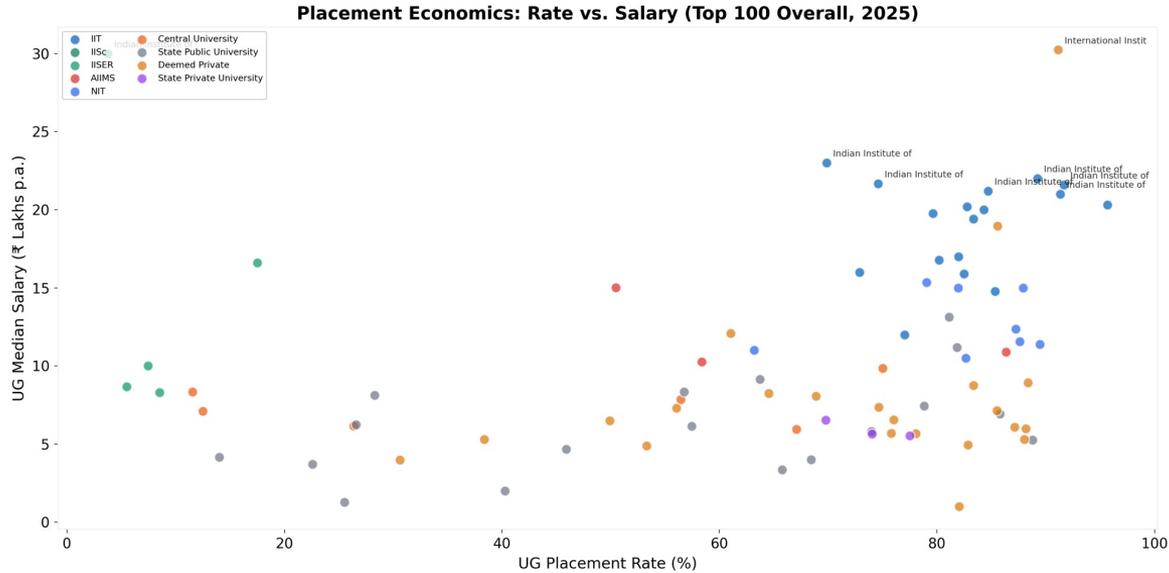


Key Insight

IITs derive ~70% of external revenue from sponsored research; Deemed Private institutions favor consultancy and EDP. This structural difference in revenue models determines how each type approaches ranking improvement — research grants vs. industry partnerships.

Two Clusters: Salary vs. Coverage Maximizers

Placement Rate vs. Median UG Salary (Top 100 Overall, 2025)

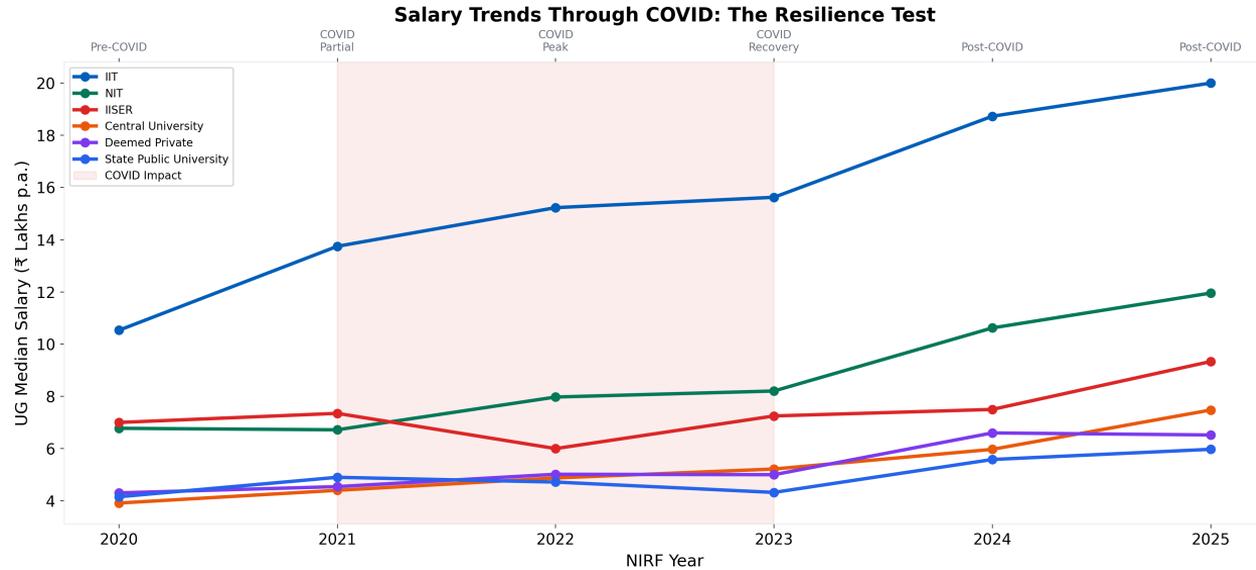


Key Insight

IITs form a 'high-salary, moderate-placement' cluster (₹15–25 LPA, 60–80% rate). NITs and Deemed Private form 'high-placement, moderate-salary' cluster (₹6–12 LPA, 70–90% rate). Two fundamentally different strategies — salary ceiling optimization vs. employment coverage maximization.

Salary Trends Through COVID

UG Median Salary by Institution Type (₹ LPA, 2020–2025)

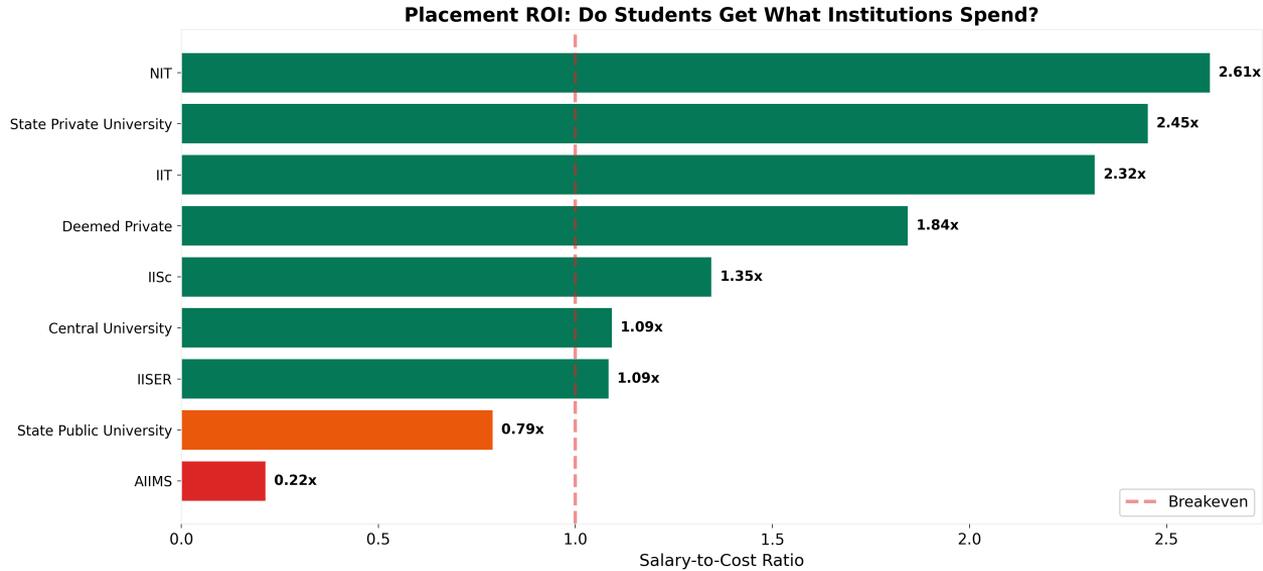


Key Insight

IIT salaries nearly doubled: ₹10.5 → ₹20.0 LPA. NITs: ₹6.8 → ₹12.0 LPA. No visible COVID dip at the aggregate level for Top 100 — either genuine resilience at the premium end, reporting lag, or upward bias in self-reported figures.

Placement ROI: Salary vs. Institutional Cost

Salary-to-Cost Ratio (Median Salary ÷ Expenditure per Student) by Type



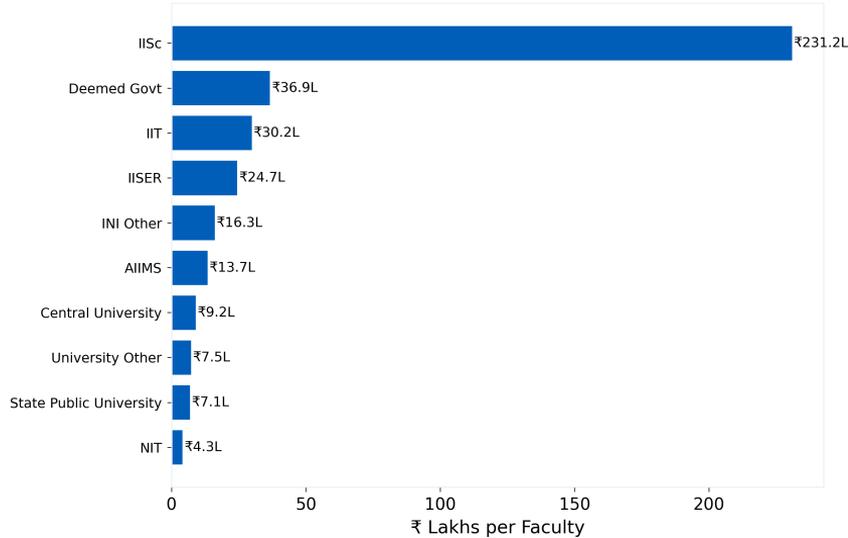
Key Insight

NITs and IITs deliver ROI above 1.0x — graduates earn more annually than the institution spends per student. Central Universities fall below 0.5x, raising questions about return on public investment. This investor-grade metric has never been published for Indian institutions.

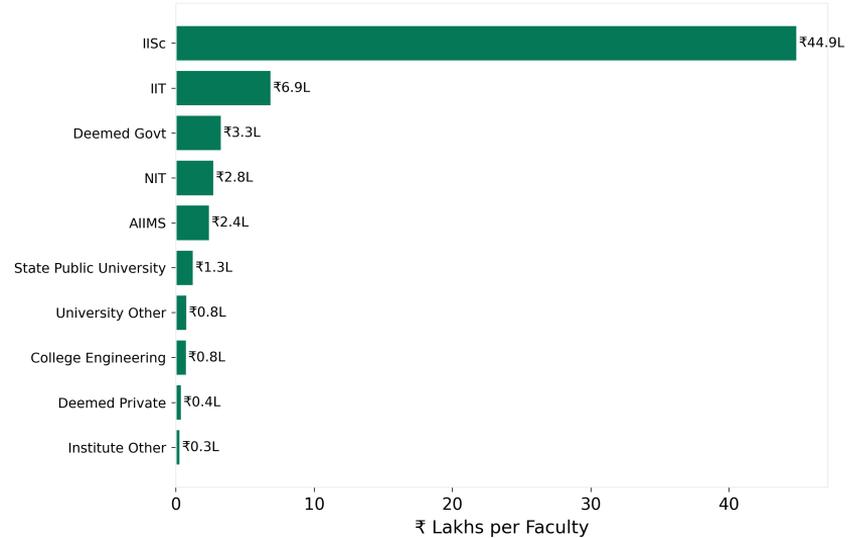
Research Funding per Faculty

Sponsored Research and Consultancy Revenue per Faculty Member (₹ Lakhs)

Sponsored Research per Faculty (2025)



Consultancy Revenue per Faculty (2025)

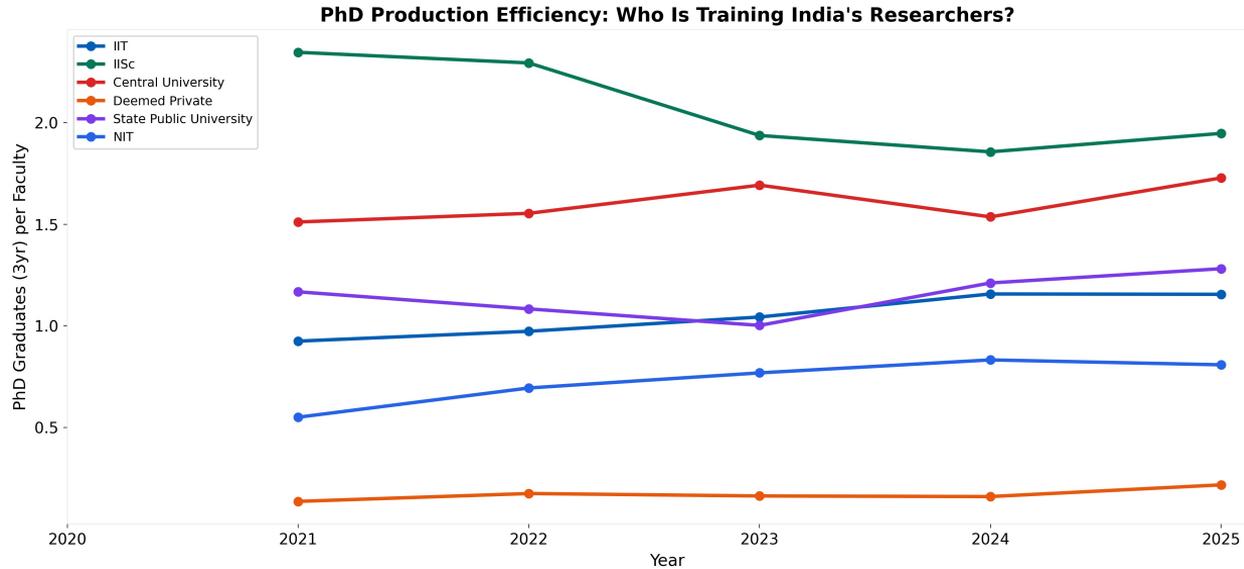


Key Insight

IITs generate ₹15–25L per faculty in research — 3–5× NIT level, 10× State Public level. In consultancy, the gap narrows: IITs ₹5–8L vs. Deemed Private ₹2–4L. Industry engagement is less dependent on brand than pure research grant funding.

PhD Production Efficiency

PhD Graduates per Faculty Member (3-Year Cumulative) by Institution Type

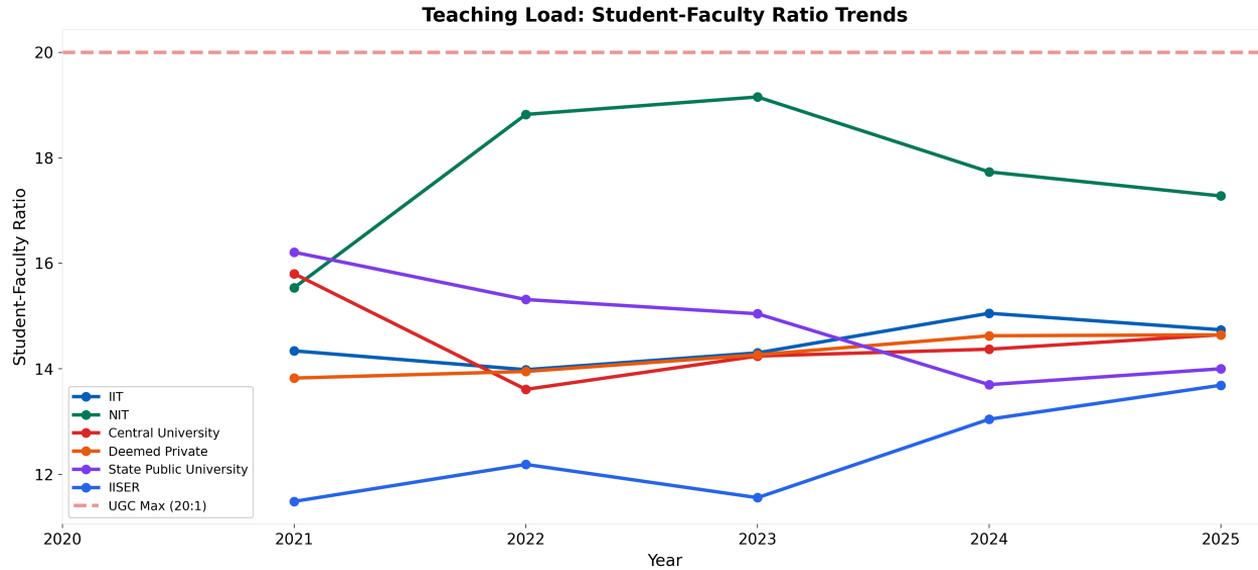


Key Insight

IISc produces 0.8–1.0 PhD/faculty — highest in the system. IITs follow at 0.5–0.7. Central Universities produce only 0.3–0.4 despite their mandate and funding — revealing massive underutilization of doctoral capacity and structural mismatch between funding and output.

Teaching Load: Student-Faculty Ratios

Student-Faculty Ratio Trends by Institution Type (2020–2025)



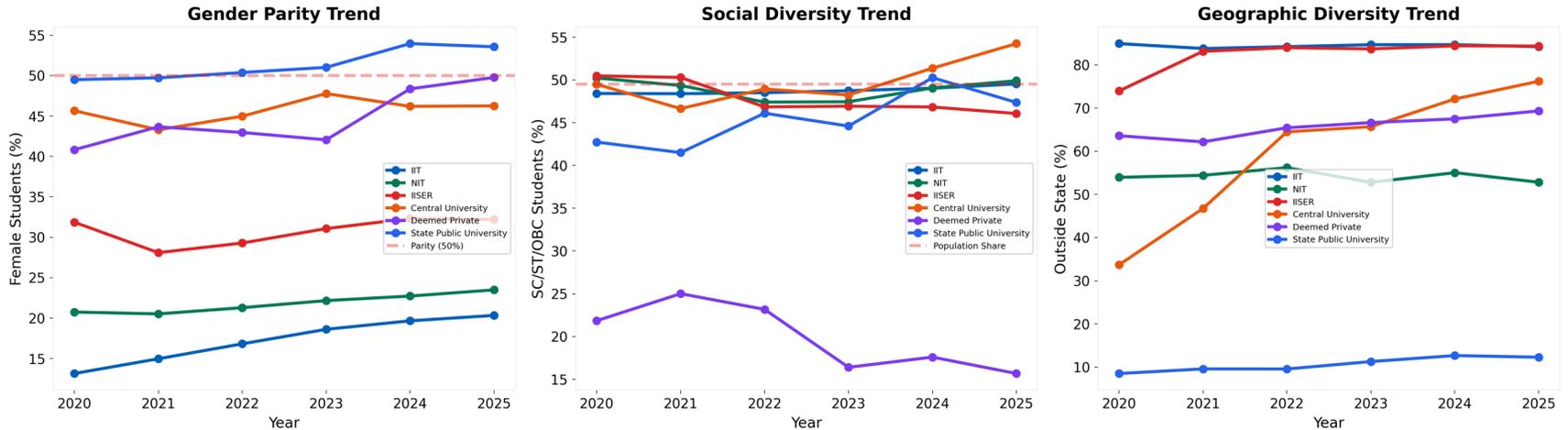
Key Insight

State Public Universities at 25–30:1 — well above UGC's 20:1 maximum. IISERs maintain 8–10:1 (optimal for research mentoring). IITs at 12–15:1 and improving. The trend is worsening for public universities while improving for IITs — divergence accelerating.

The Equity Dashboard

Gender, Social, and Geographic Diversity Across Institution Types

The Equity Dashboard: Gender, Social, and Geographic Diversity (Top 100 Overall)



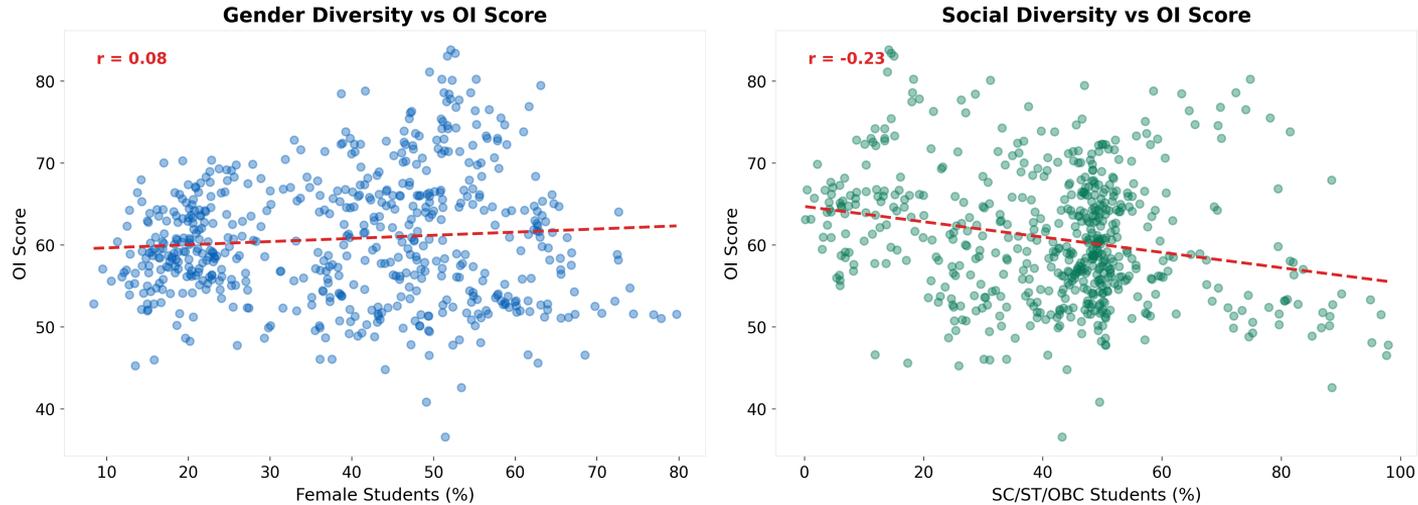
Key Insight

IITs improved gender from 13.1% to 20.3% but remain the least diverse type. Deemed Private leads at 49.8%. Geographic diversity: IITs draw 70–80% from outside home state (truly national), State Public <20% (essentially local institutions).

Does OI Actually Measure Inclusivity?

NIRF OI Score vs. Actual Diversity Metrics

Does NIRF OI Score Actually Measure Inclusivity?

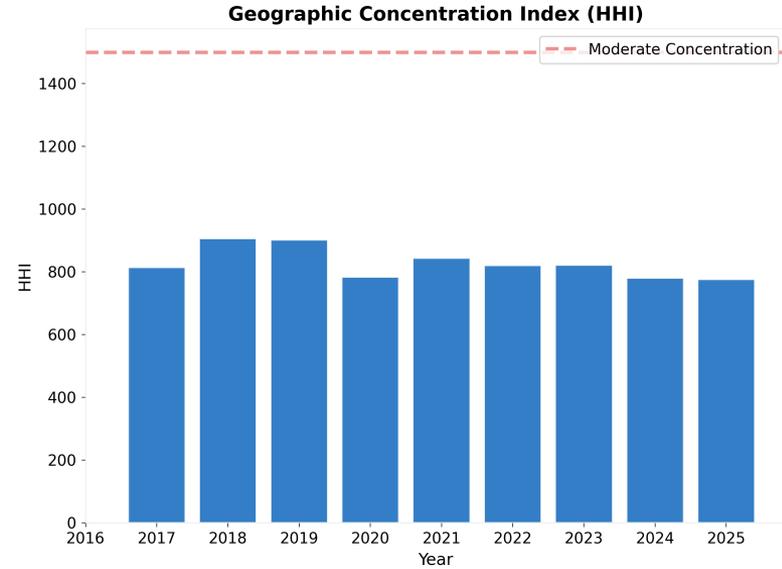
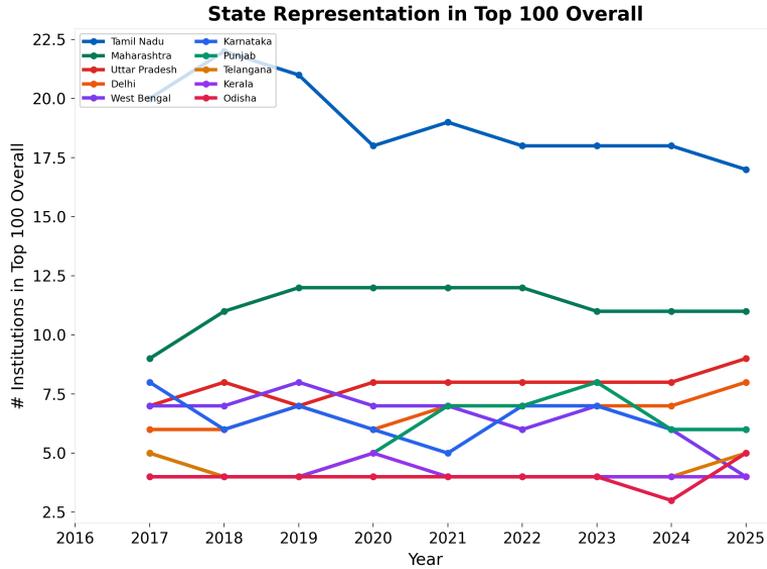


Key Insight

Near-zero correlation between OI score and actual diversity: $r=0.08$ for Gender Diversity and $r=-0.23$ for Social Diversity. OI captures multiple factors — facilities, outreach, quotas — diluting any single signal. A high OI score does not necessarily mean an inclusive institution; a low score does not mean exclusion.

State Concentration: The Five-State Oligopoly

State Representation in Overall Rankings and HHI Concentration Index

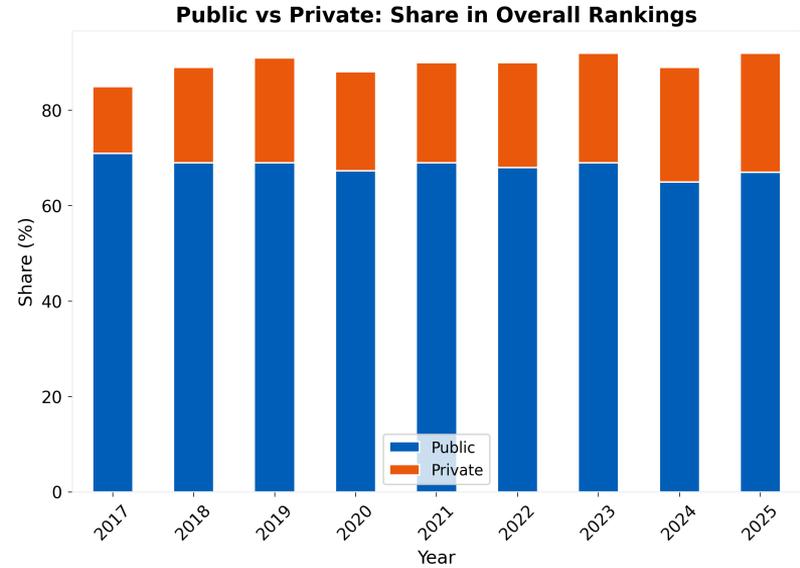
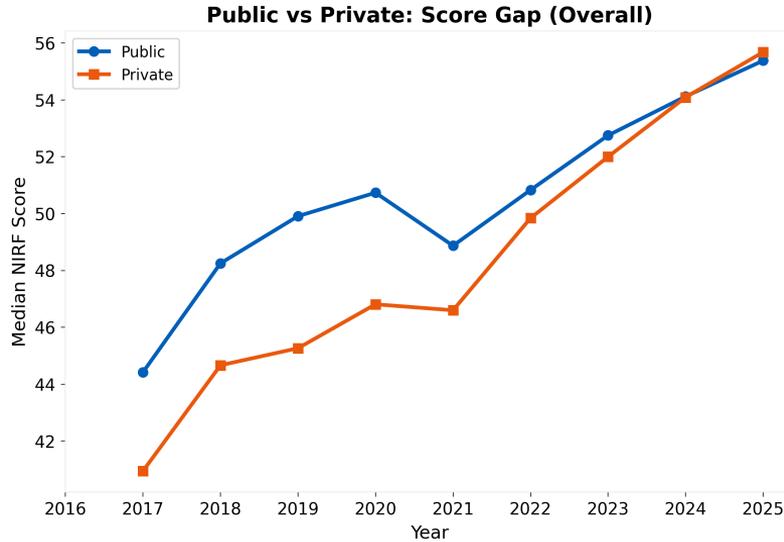


Key Insight

TN + MH account for 45–50% of ranked institutions. HHI stable at 1,000–1,200 (moderate concentration). Same 5 states (TN, MH, UP, Delhi, KA) controlled 51% since 2020 — geographic inequality is structural, not cyclical.

The Closing Gap

Median Score Trend and Representation: Public vs Private in Overall Rankings



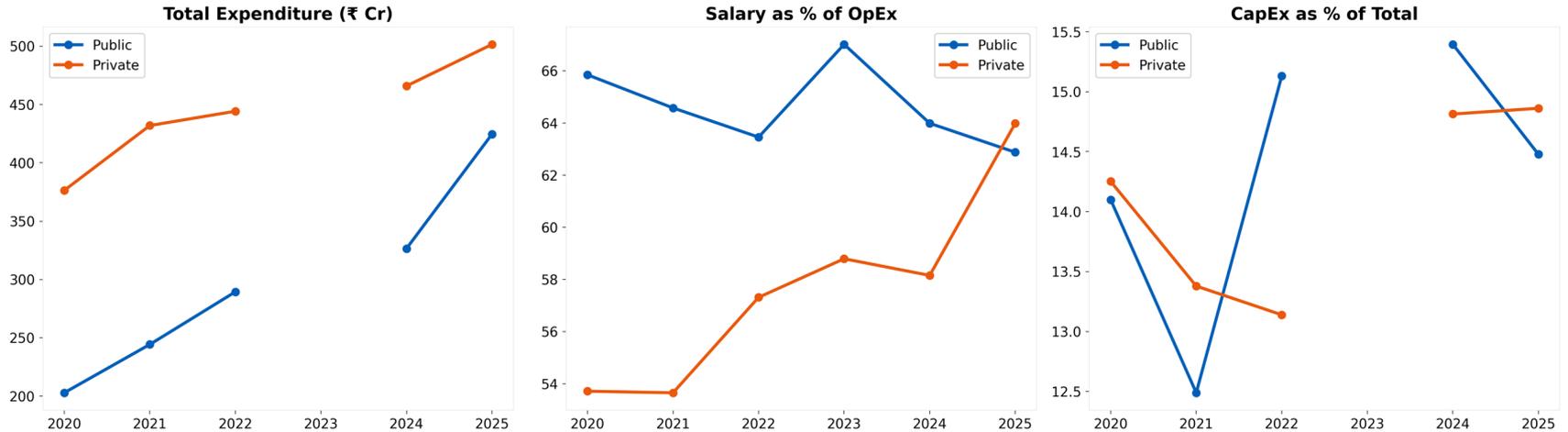
Key Insight

Public-Private gap narrowed from 4.0 pts (2020) to 1.1 pts (2025). Private institutions now form 34% of Overall top 100, up from <25% a decade ago. Convergence is structural, driven by aggressive investment in placement infrastructure and teaching quality.

Two Financial Economies

Expenditure Composition: Public vs Private Institutions (Top 100 Overall)

The Two Economies of Indian Higher Education

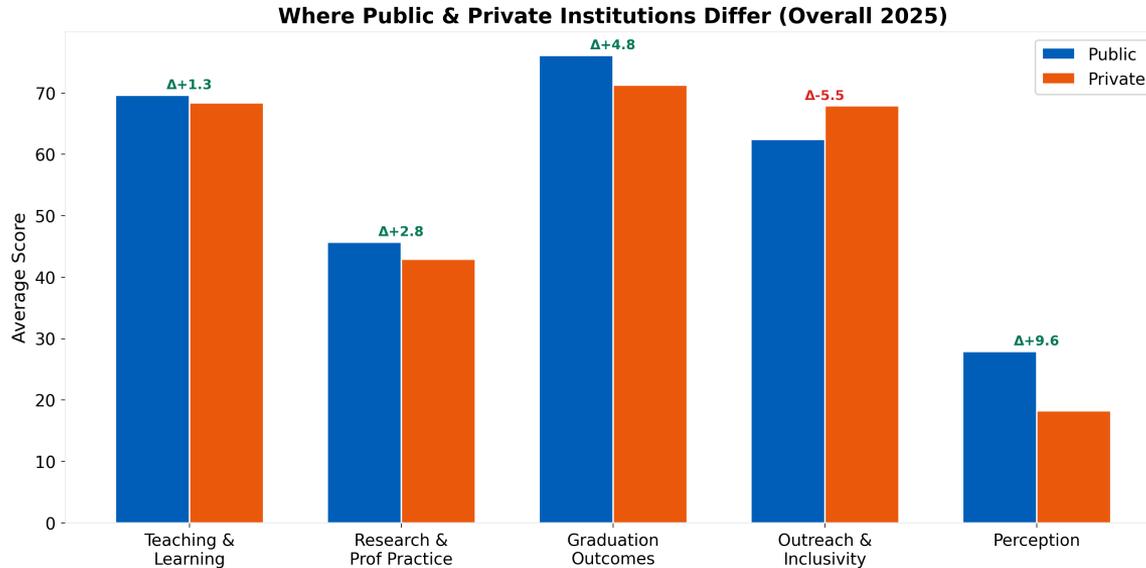


Key Insight

Public: 60–65% OpEx on salaries (fixed cost burden limiting flexibility). Private: 50–55% on salaries, higher CapEx share (15–20% vs 10–12%). Public operates larger budgets but extracts less ranking performance per rupee — a structural efficiency disadvantage.

Where Public Still Leads — and Doesn't

Parameter-Level Gap: Public vs Private (Overall 2025)



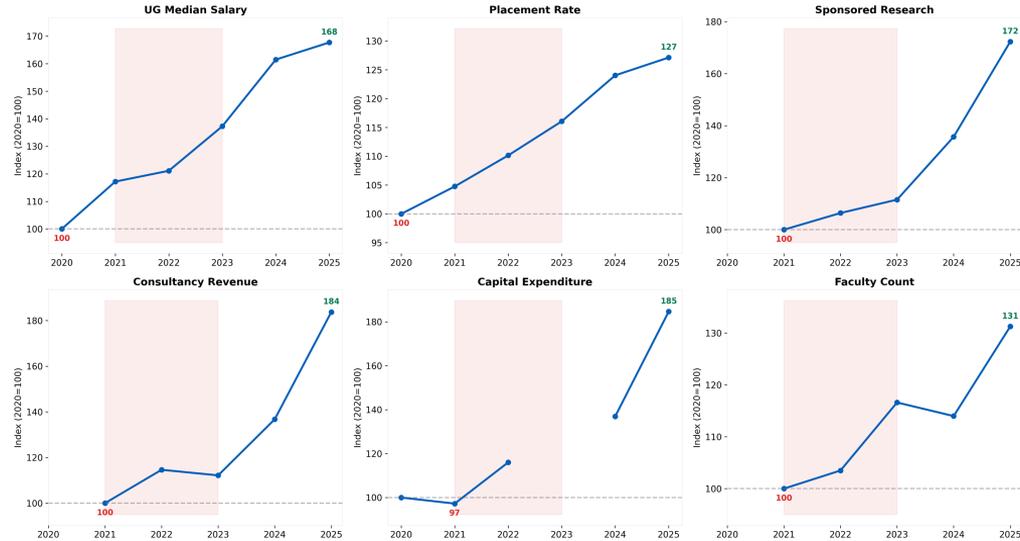
Key Insight

Public leads only on RPC (+8–10 pts) driven by government research funding. Private has closed the gap on TLR, GO, OI. Perception remains the ultimate moat: IITs enjoy 15–20 pt premium that Private cannot replicate — a legacy advantage compounding over decades.

COVID Impact Dashboard

Key Financial and Academic Metrics Indexed to 2020 (Top 100 Overall)

COVID Impact Dashboard: Key Metrics Indexed to 2020 (Top 100 Overall)

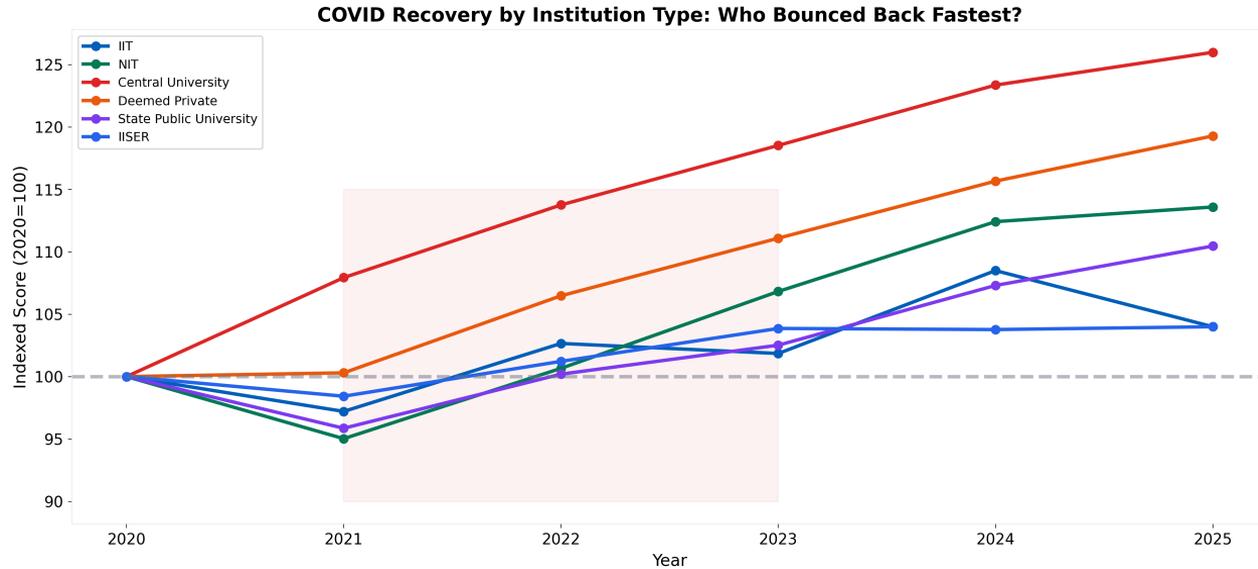


Key Insight

Surprisingly muted aggregate impact at the top tier. CapEx, salaries, and research funding continued rising through COVID. This reflects elite institution resilience — but the real devastation likely hit institutions ranked 200+ that are outside our dataset.

Differential Recovery by Institution Type

Post-COVID Score Trajectory Indexed to 2020 by Institution Type

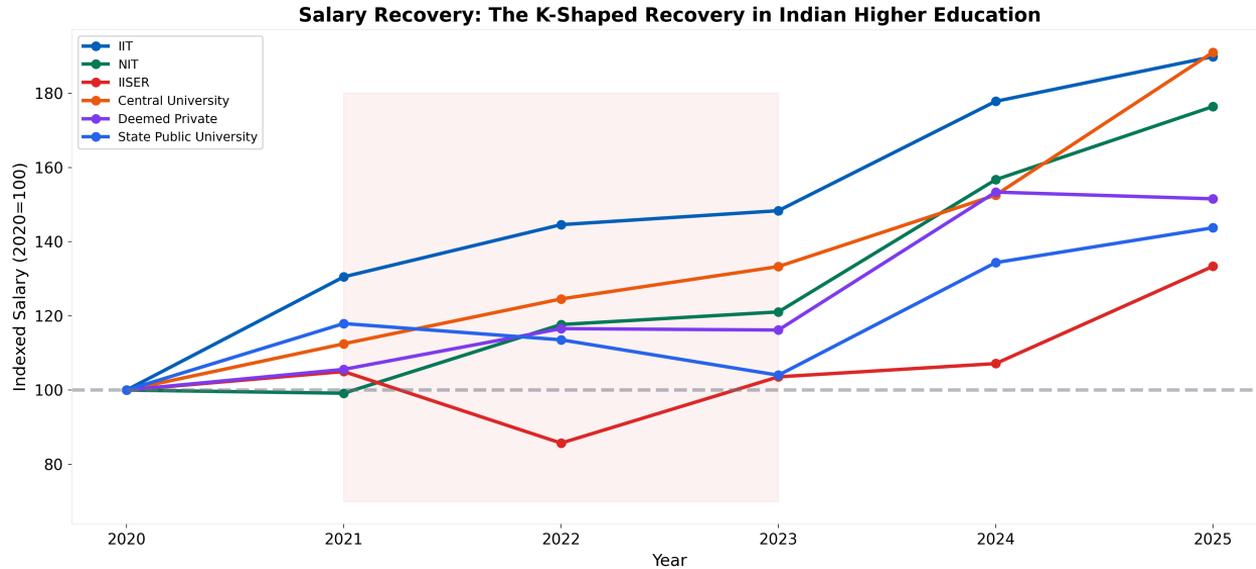


Key Insight

IISERs strongest (100→108 indexed). State Public Universities flattest — neither dipping nor recovering, suggesting structural stagnation independent of COVID. IITs maintained stable trajectories throughout, insulated by brand and diversified funding.

The K-Shaped Salary Recovery

UG Median Salary Trajectory by Institution Type (₹ LPA, 2020–2025)

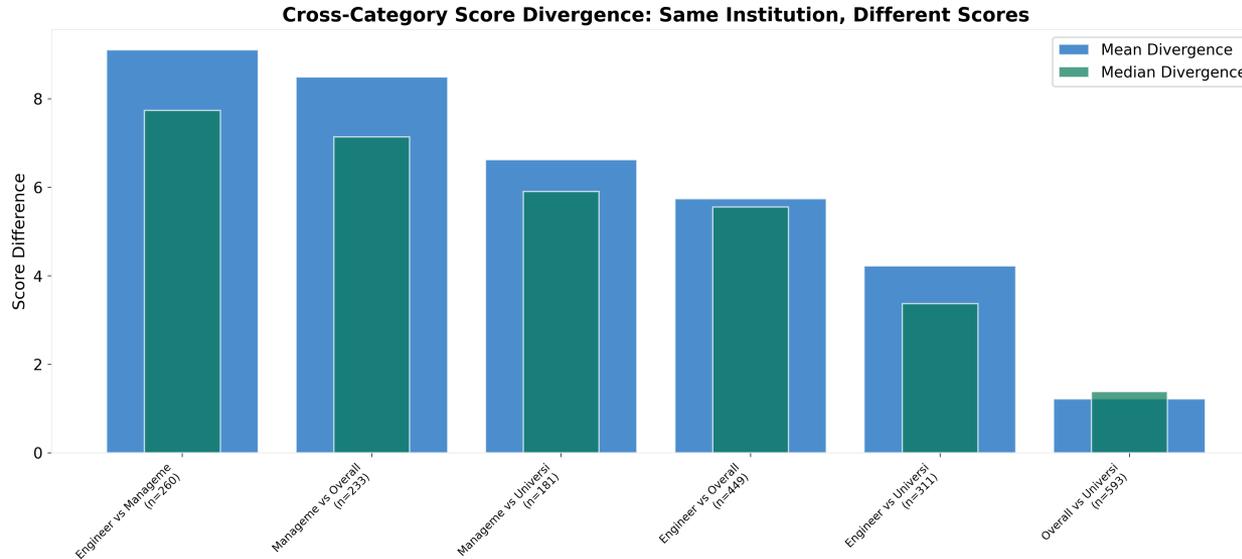


Key Insight

IIT: ₹10.5L → ₹20.0 LPA (+₹9.5L absolute gain). Central Univ: ₹3.9L → ₹7.5 LPA (+₹3.6L gain). Despite similar % growth (~90%), the absolute gap doubled from ₹6.6 to ₹12.5 LPA. Indian higher education's K-shaped recovery is widening inequality at the output level.

Same Institution, Different Scores

Cross-Category Score Divergence for Multi-Category Institutions

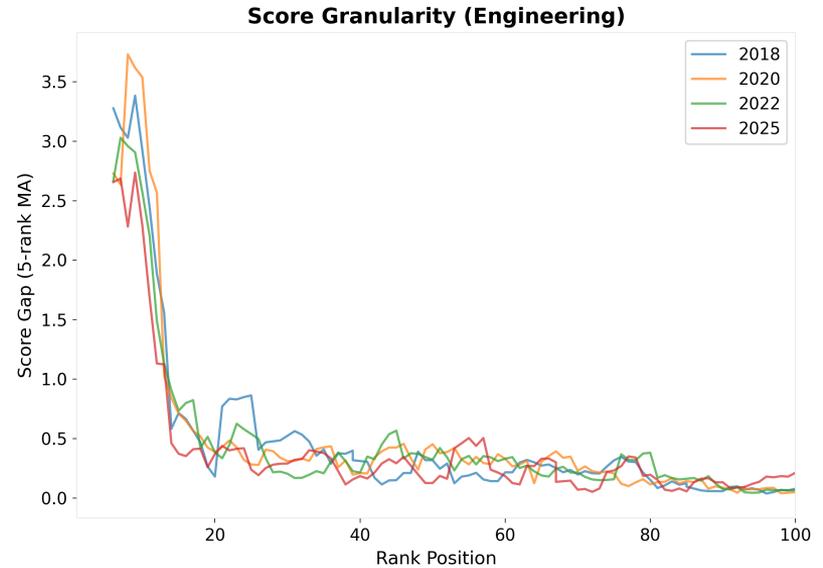
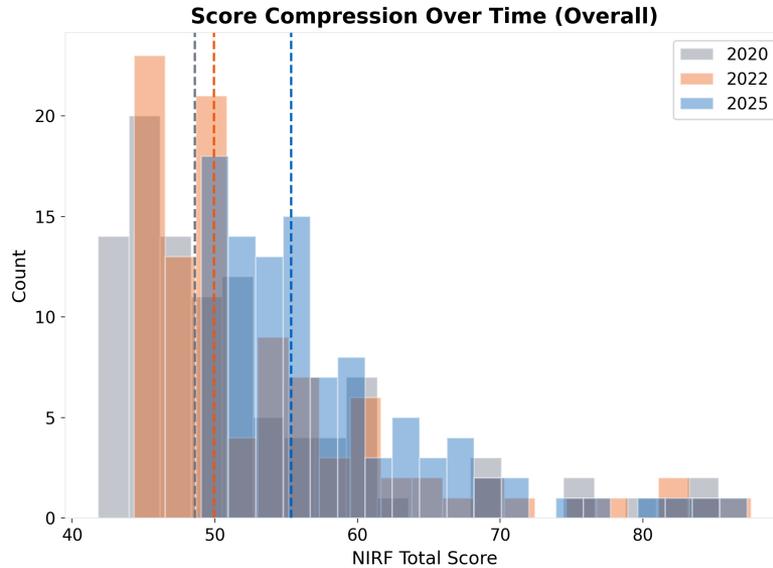


Key Insight

Same institution scores 10–15 pts differently across categories in the same year — different peer groups, distributions, weights. NIRF scores are relative performance indicators within specific competitive contexts, not absolute quality measures.

Score Compression: The Tightening Race

IQR of Scores and Rank Granularity Over Time

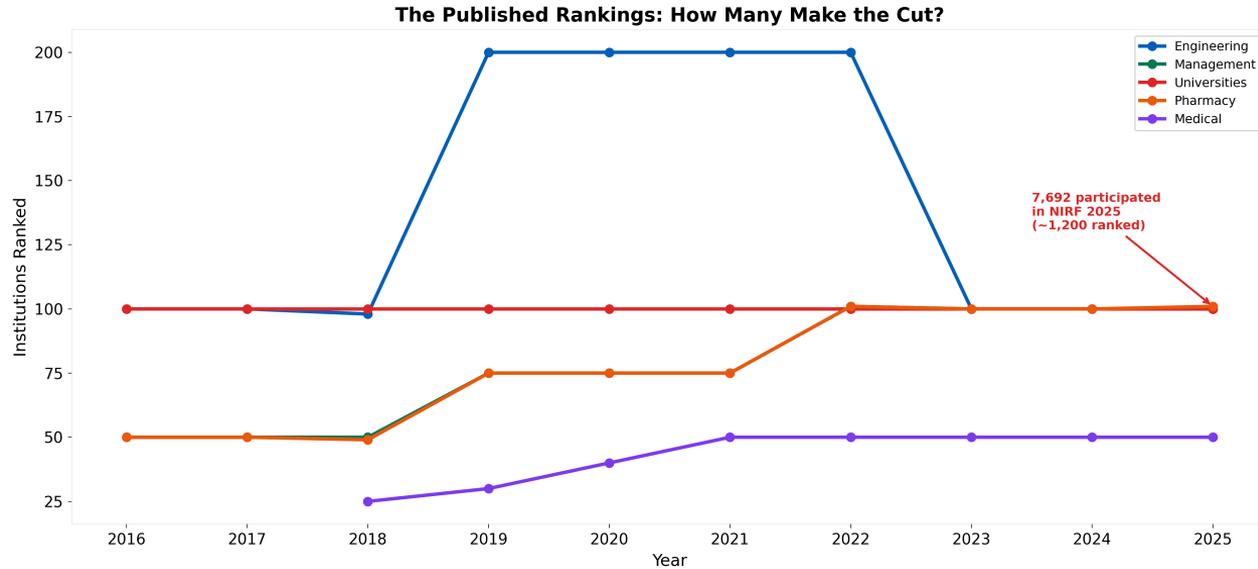


Key Insight

IQR compressed from 10.1 (2020) to 8.5 pts (2025). In Engineering, consecutive rank gaps at positions 20–50 are often <0.5 points. Marginal optimizations — adding publications, reclassifying expenditure — yield disproportionate rank swings. Tighter race = greater gaming incentive.

The Great Filter

NIRF Participation vs. Published Rankings (2016–2025)

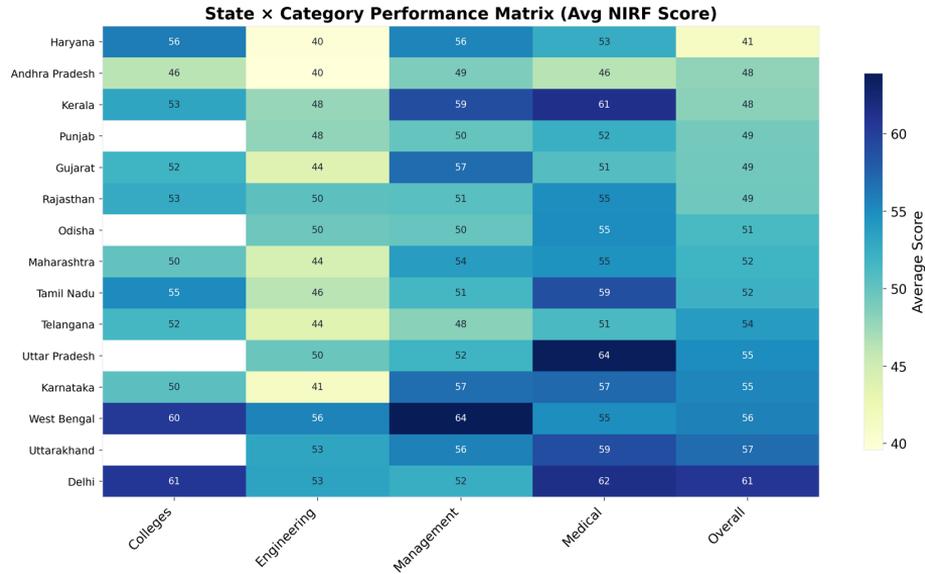


Key Insight

7,692 participated in 2025, only ~1,200 ranked — 85% are invisible. These 6,500+ institutions represent the actual landscape of Indian higher education. Their quality, resources, and trajectories remain entirely unmeasured by any public dataset.

State × Category Performance Matrix

Heatmap of State Performance Across Major NIRF Categories

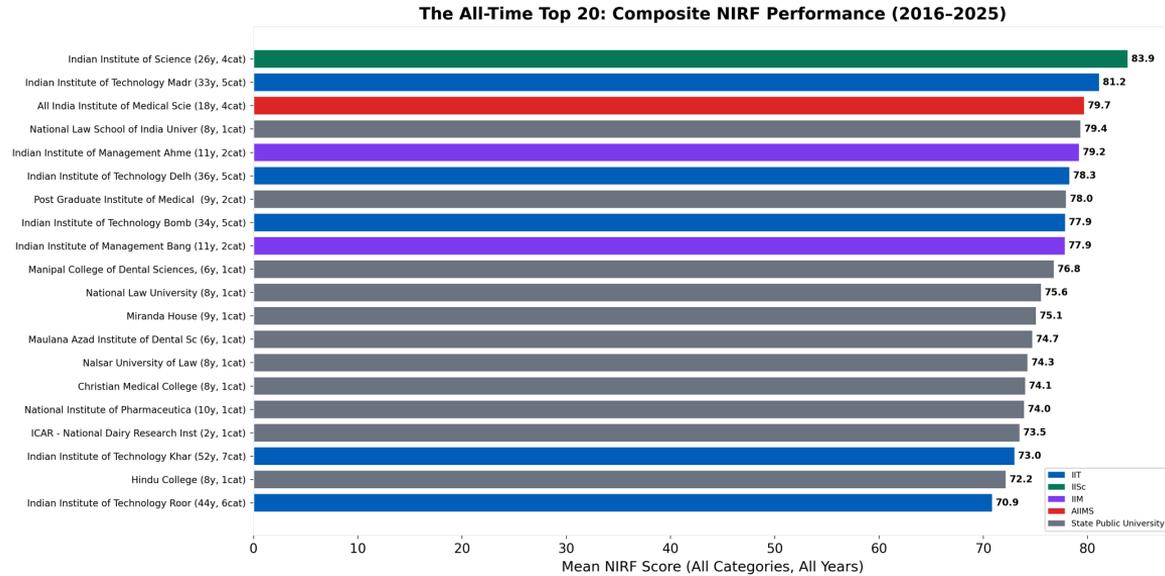


Key Insight

TN leads Engineering & Colleges. Delhi leads Universities & Management. Maharashtra most balanced. Karnataka punches above weight in Overall. UP's high representation comes from volume, not quality — average scores below national median.

The All-Time Top 20

Composite Mean NIRF Score Across All Categories and Years (2016–2025)



Key Insight

IIT Madras leads, followed by IISc Bangalore and IIT Bombay. Top 20 dominated by IITs (8 institutions). IISc, AIIMS Delhi, JNU, BHU are notable non-IIT entries. Composite smooths year-over-year volatility, capturing sustained excellence over single-year peaks.

Thank You

Aurobindo Saxena

Founder & CEO, RAYSolute Consultants

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