



Organizational Resilience of Private and Government Higher Education Institutions in India during COVID-19: A Narrative Review of Financial Sustainability, Human Resource Management, and Digital Transformation

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Abstract

The COVID-19 pandemic was one of the most severe disruptions in the history of education, and it affected privately and publicly funded institutions in strikingly different ways. This narrative review synthesises the empirical literature on private and government higher education in India before and during the pandemic and interprets it through three management theories—organizational resilience, resource dependence theory, and contingency theory—organised around four themes: financial sustainability and access, institutional performance, human resource management and teacher welfare, and digital transformation. Drawing on a transparent search of major databases and a defined set of eligibility criteria, the review assembles evidence from higher-education studies, supplemented by system-level indicators, and reads it as a problem of institutional strategy rather than education policy alone. The pre-pandemic private model—cost-efficiency and accountability achieved through concentrated tuition income and low-paid, insecure employment—was well fitted to a stable market. The pandemic changed the environment: fee-dependent private institutions absorbed a severe financial shock, with falling revenues, declining admissions, and widespread pay cuts, while salaried public institutions and national platforms such as SWAYAM offered comparative stability and low-cost access, and national data recorded a marked shift of enrolment toward government provision. The abrupt move online widened a pre-existing digital divide even as it accelerated a durable turn to blended learning. The review's theoretical contribution is an integrated framework that combines resource dependence, contingency, and organizational-resilience theory to explain how ownership form governed institutional vulnerability, showing that concentrated tuition dependence and an insecure-employment model turned private-sector strengths into liabilities under stress. For managers, the central implication is that diversifying revenue away from concentrated fee income and treating employment security as a strategic asset are preconditions of institutional resilience rather than discretionary costs. The review sets out detailed implications for university administrators, human resource managers, institutional leaders, and policymakers, and is bounded by its reliance on secondary sources and by the fact that some of the strongest Indian quantitative evidence concerns schools rather than colleges.

Keywords: organizational resilience; resource dependence theory; higher education management; financial sustainability; human resource management; digital transformation; COVID-19; India

1. Introduction

Education shapes individual opportunity and national prosperity, and for economies it is the quality of learning rather than the mere quantity of schooling that is most strongly tied to long-run growth (Hanushek & Woessmann, 2008). A review written for management scholarship, however, must begin one step earlier, from the institutions that produce that learning. Colleges and universities are organizations. They mobilise resources, employ and manage people, adopt technologies, and compete for students, and their capacity to keep doing so under stress is an organizational property, not merely an educational one. India delivers higher education through a mixed system in which government, private, and semi-government colleges and

universities operate side by side, and the relative performance of public and private provision has long been debated. The COVID-19 pandemic turned that debate into a natural experiment in organizational resilience.

The disruption was immense. United Nations estimates cited in national reporting placed the number of affected learners in India at more than 320 million when campuses closed (Sharma, 2020). Institutions moved abruptly online, and the transition exposed how unevenly the capacity to teach and learn remotely was distributed across households and regions (Jafar et al., 2023; Sarkar et al., 2023). It also exposed something managerial: the financial fragility of institutions that live on tuition,

and the precariousness of the people they employ (PTI, 2021). These strains were not incidental. They followed from how each type of institution is financed, staffed, and structured, and that is the subject of this review.

This paper synthesises the evidence on private versus government higher education in India before and during the pandemic, and it reads that evidence through the lens of management theory. Rather than asking which sector is “better,” it asks a resilience question: when a single external shock passed through two different organizational forms, which form absorbed it, which transmitted it, and why. The central argument is that ownership form shaped three organizational attributes—the resource base, the cost-and-employment model, and digital adaptive capacity—and that these attributes, fitted to a stable environment, determined how each sector fared when the environment changed. Features that had been private-sector strengths in normal times became liabilities under stress. This is where the management gap lies. A large literature documents the pandemic’s disruption of Indian higher education, but most of it examines pedagogy, technology adoption, or public policy; comparatively little treats the two sectors as organizations—as configurations of resource base, employment model, and adaptive capability whose resilience can be compared—and it is that organizational and managerial question, rather than an educational-policy one, that this review takes up.

The review pursues four objectives. First, it establishes the pre-pandemic organizational baseline of the two sectors. Second, it examines how the pandemic shock propagated through institutional finances and human resources. Third, it assesses digital transformation as a source of adaptive capacity. Fourth, it derives managerial and policy implications for the people who run and regulate higher education. In doing so it makes two contributions to management scholarship on education: it applies an integrated theoretical frame—resource dependence, contingency, and organizational resilience—to the Indian higher-education sector, and it reframes a set of findings usually discussed in policy terms as questions of institutional strategy, human resource management, and financial sustainability. The remainder of the paper sets out the theoretical framework (Section 2) and review methodology (Section 3); analyses the pre-pandemic baseline (Section 4), the financial shock (Section 5), human resource management under crisis (Section 6), and digital transformation (Section 7); synthesises the evidence (Section 8); draws managerial and policy implications (Section 9); and states limitations and future research (Section 10) before concluding (Section 11).

2. Theoretical Framework

Because a management audience will ask not only what happened but through what mechanisms, this review is organised around three complementary theories of how organizations relate to their environments. Each illuminates a different facet of the pandemic shock, and together they form the interpretive spine of the analysis.

2.1 Organizational Resilience

Organizational resilience is the capacity of an organization to anticipate potential threats, to cope effectively with adverse events, and to adapt to changed conditions so that it emerges functioning and, ideally, strengthened. Ducheck (2020) conceptualises it as a meta-capability composed of three successive stages—anticipation, coping, and adaptation—each resting on more specific capabilities such as the ability to observe the environment, mobilise resources, and reconfigure routines. Resilience in this sense is not a fixed trait but a capacity built from an organization’s resources and relationships, which means that two institutions facing the same shock can differ sharply in outcome. In higher education the framing has direct empirical support. In a study of universities during the pandemic, Shaya et al. (2023) found that institutional resilience depended on the availability of resources, social capital, power relationships, and an innovative culture, moderated by crisis leadership and the resilience of employees. Resilience, in other words, is produced by the very financial and human-resource structures this review examines.

2.2 Resource Dependence Theory

If resilience describes the outcome, resource dependence theory helps explain the exposure. Pfeffer and Salancik (1978) argued that organizations are not self-sufficient: they depend on their environment for the resources they need to survive, and this dependence gives external actors leverage over them. The greater an organization’s reliance on a single, concentrated, and volatile resource that it cannot easily secure elsewhere, the more vulnerable it is to disruption of that resource and the more its behaviour is constrained by whoever controls it (Hillman et al., 2009). The theory’s central prescription is equally clear: to reduce dependence, diversify. Applied to higher education, resource dependence theory maps almost exactly onto the fault line between the sectors. Private institutions in India are funded very largely by student fees—a single revenue stream tied directly to current enrolment—whereas government institutions draw on public budgets and salaried funding that are insulated from short-run swings in demand. Fowles (2014) shows that dependence on tuition measurably shapes institutional behaviour and priorities in higher education, confirming that the mechanism operates in this sector and not only in firms. The proposition that follows (P1) is that the more an institution depends on tuition as a concentrated

resource, the more vulnerable it is to an enrolment or fee shock.

2.3 Contingency Theory

Resource dependence explains why the private sector was exposed; contingency theory explains why its exposure was not obvious beforehand. The core claim of contingency theory is that there is no single best way to organise: the most effective structure depends on the environment the organization faces, and performance follows from the fit between the two (Donaldson, 2001; Lawrence & Lorsch, 1967). A configuration that is well fitted to one environment can become a misfit when the environment changes. The Indian private sector's model—lean staffing, low pay, insecure contracts, and accountability enforced through enrolment and results—was well fitted to a stable, growing market, where it delivered cost-efficiency and effort at low unit cost. The pandemic changed the environment abruptly, and the same features that had produced efficiency now produced fragility. This yields a second proposition (P2): organizational features that enhance performance under stable conditions can become liabilities when the environment shifts to crisis.

2.4 An Integrated Frame

The three theories are complementary rather than competing. Resource dependence identifies the point of exposure, the resource base; contingency explains why that exposure was latent and then suddenly salient, through the change in environmental fit; and resilience describes the capacity, rooted in resources, people, and adaptive routines, that determined how well each institution absorbed and adapted to the shock. Two further propositions complete the frame. Employment security operates as a resilience resource, so that institutions which transmit a financial shock directly to their workforce erode the human capital on which their educational quality depends (P3). And pre-existing digital infrastructure and capability constitute adaptive capacity that buffers instructional continuity, though only where access to that capacity is equitably distributed (P4). Integrated, the three lenses describe a single causal chain: ownership form sets an institution's resource base and employment model (resource dependence), the fit of that configuration to the environment determines whether its features operate as strengths or liabilities (contingency), and the resulting capacity to absorb and adapt is its resilience. The four propositions are analytical rather than statistical—they are not hypotheses tested on primary data here but organising claims that structure the synthesis, and Section 8 returns to each to state how far the assembled evidence supports it. Although the framework is applied to higher education, it is not specific to it: the same logic extends to any service organization whose revenue is concentrated in a single demand-sensitive stream and whose delivery depends on a professional workforce—private

hospitals, fee-dependent schools, and subscription-based firms among them—so the propositions are offered as portable rather than sector-bound. Table 2 sets out the integrated framework and links each lens to the mechanisms and themes examined below.

3. Review Methodology

This study is a narrative review conducted with a systematic and transparent search and selection procedure. A narrative synthesis is appropriate because the review integrates heterogeneous evidence—empirical studies of varied designs, reviews, and authoritative institutional reports—around a broad, theory-oriented question that a purely aggregative method could not accommodate. Because the included sources differ markedly in design—cross-sectional surveys, exploratory factor analyses, case studies, simulation models, scholarly analyses, and institutional reports—and report incommensurable outcomes, a statistical meta-analysis was neither feasible nor appropriate; narrative synthesis instead integrates their findings around the theoretical framework. To address the principal weakness of narrative reviews, the opacity of selection, the search strategy, eligibility criteria, quality appraisal, and resulting corpus are reported below.

Literature was identified through structured searches of Scopus, Web of Science, and Google Scholar, together with the platforms of major academic publishers, including ScienceDirect, Springer Link, SAGE, Taylor & Francis, and Wiley. These were supplemented by the reports of recognised bodies such as UNESCO and the Annual Status of Education Report (ASER), and by backward citation searching of key articles. The search combined four concept blocks with Boolean operators: sector (private OR government OR public), level (higher education OR college OR university OR institution), event (COVID-19 OR pandemic OR lockdown OR online learning), and outcome (financial sustainability OR job satisfaction OR teacher welfare OR access OR fees OR digital divide OR blended learning OR resilience), with an emphasis on the Indian context. Searches were run through 2024. After de-duplication, the retained records were screened in two stages against the eligibility criteria set out in Table 1.

Studies were included if they were peer-reviewed empirical studies, systematic or narrative reviews, or authoritative institutional reports; if they addressed at least one of the review's four themes; and if they concerned higher education, with system-level indicators from the wider education sector retained where they provided essential national context. Indian evidence was prioritised, and international higher-education evidence was retained where Indian college- and university-level evidence was thin, so that the theoretical mechanisms could be

examined even where local data were sparse. Studies confined exclusively to school-level questions were excluded unless they supplied indicators, such as national enrolment shifts, for which no higher-education equivalent exists; opinion pieces without evidence, and records whose full text could not be retrieved, were also excluded. Table 1 details the criteria.

Screening proceeded in two stages—title and abstract, then full text—with each candidate appraised for relevance to the review themes, methodological transparency, and contribution to the theoretical argument. Rather than scoring studies with a formal instrument, quality was appraised against three criteria: methodological transparency (a clearly reported design, sample, and analysis), peer-review status, and, for institutional reports, the authority and representativeness of the issuing body.

Sources that were directly relevant but methodologically limited—single-survey reportage in particular—were retained but weighted accordingly and are identified as such in the text, so that the strength of the evidence behind each claim is visible to the reader. Because the review is interpretive rather than exhaustive, it does not claim to capture every relevant study, and no meta-analytic pooling was attempted. The evidence base synthesised here comprises 25 sources bearing directly on the phenomenon—22 peer-reviewed studies, reviews, and scholarly analyses and 3 authoritative reports or items of reportage—interpreted through 6 foundational theoretical and contextual works, for a total of 31 sources. Where a claim rests on school-level rather than higher-education evidence, the text says so explicitly, so that readers can weigh it accordingly.

Table 1 Inclusion and Exclusion Criteria Applied in the Review

Parameter	Inclusion criteria	Exclusion criteria
Educational level	Higher education (colleges, universities, and other HEIs); system-level indicators for national context	Exclusively school-level studies, unless supplying essential national indicators (e.g., enrolment shifts)
Thematic focus	Financial sustainability and access, institutional performance, HRM and teacher welfare, digital transformation	Topics unrelated to the four review themes
Source type	Peer-reviewed empirical studies, systematic or narrative reviews, and authoritative institutional reports	Opinion pieces, blogs, and non-evidential commentary
Context	Indian higher education prioritised; international HE evidence retained where Indian evidence was thin	Studies with no transferable relevance to the Indian HE context
Language	English	Non-English without an available translation
Time frame	2008–2024, prioritising pandemic-era (2020–2024) evidence	Superseded or duplicate records
Retrievability	Full text accessible	Full text not retrievable

4. The Pre-Pandemic Baseline: Organizational Configurations of the Two Sectors

Any assessment of the pandemic must start from the organizational configurations already in place. Private provision in India is not confined to the affluent; a large tier of low-fee private institutions serves lower-income and rural households, and its growth has been one of the defining features of Indian education (Singh & Bangay, 2014). Whether that growth is genuinely equitable is contested, because access to private education is socially patterned and its apparent benefits are hard to separate from the characteristics of the families who choose it (Kumar & Choudhury, 2021; Singh & Bangay, 2014). This selection problem matters for management analysis: measured differences between the sectors partly reflect who enrolls, not only what institutions do. Much of this foundational evidence, it

should be said, is drawn from the school sector, where the strongest Indian comparative data exist; it is used here to characterise the organizational model, not to stand in for college-level outcomes.

On cost and measured performance, the most influential Indian comparison remains Muralidharan and Kremer's (2008) study of rural schooling, which found that private schools operated at roughly one-fifth of the per-pupil cost of government schools, kept lower pupil-teacher ratios, and were associated with modestly higher test scores even after adjustment for family and school characteristics. These findings are routinely cited as evidence of a private efficiency advantage. They must be read with care, because they concern schools rather than colleges and predate the pandemic by more than a decade. For this review their value is not as a verdict on quality but as a window onto the organizational model that produced the efficiency, because the way that low

cost was achieved is precisely what turned fragile under stress.

That model is the crux. The low cost of private provision rested on how private institutions employed people. Muralidharan and Kremer (2008) documented that private-school teachers were markedly less likely to be absent and more likely to be actively teaching than their public counterparts, yet were paid a small fraction of public-sector salaries and worked without tenure or benefits. The sector, in short, bought accountability and cost-efficiency with insecure, low-paid work. In the language of resource dependence, it also concentrated its funding in a single, demand-sensitive stream: tuition. This is not an inference from the school sector but a documented feature of Indian higher education itself: private colleges and universities, which now account for a majority of institutions, meet their recurring costs very largely from student fees, while relying on trusts, societies, or private sponsors for capital rather than on public budgets, whereas government institutions are sustained by public grants and salaried appointments (Angom, 2019; Fowles, 2014; Pfeffer & Salancik, 1978). In a stable environment this configuration looked like a competitive strength—lean, responsive, and cheap. Its fragility became visible only when the flow of fees that sustained it was interrupted, which is exactly what the pandemic did.

5. The Pandemic Shock: Financial Sustainability and Institutional Performance

When campuses closed, every institution faced the same operational question—could it continue to teach?—and every household faced a financial one—could it continue to afford and access education? On both counts the sectors diverged. Studies of the Indian system record a sharp deterioration in the learning environment, with disruptions to teaching, assessment, and student engagement across institutions (Panakaje et al., 2022), and surveys of university students document widespread difficulty with connectivity, comprehension, and motivation during the shift online (Goswami et al., 2021). These problems were general; their financial consequences were not.

On the demand side, affordability became decisive as household incomes contracted. Cost is consistently among the most important factors in the choice between government and private institutions, and it weighs most heavily on poorer families (Kumar & Choudhury, 2021). Many private institutions continued to require full or advance fees even as services moved online, while public institutions charged little or nothing. At the national level the result was a pronounced movement toward public provision: the Annual Status of Education Report found that enrolment of children aged 6–14 in government schools rose from 65.6% in 2018 to

72.9% in 2022 (ASER Centre, 2023). This indicator is school-level, and is treated here as indicative rather than conclusive for higher education; but it is the clearest available quantitative signal of a pandemic-era shift toward the public sector, and it is consistent with the affordability pressures documented across the system.

On the supply side, the same fee dependence that had funded private provision became its principal vulnerability—the resource-dependence mechanism in action. Two kinds of evidence bear on this, and they should be kept distinct. The first is direct evidence from higher education. Modelling of tuition-dependent higher-education institutions shows that a demand shock of this kind produces severe, compounding revenue losses precisely because income is concentrated in enrolment-linked fees (Pavlov & Katsamakas, 2021), and analysis of the financial sustainability of private higher-education institutions confirms that heavy reliance on fee income, thin reserves, and limited revenue diversification are the principal determinants of their financial fragility (Al Kharusi & Sree Rama Murthy, 2017). Revenue concentration is itself the financial risk: the narrower the income base and the smaller the reserve buffer, the more a fall in enrolment translates directly into insolvency risk. The second kind of evidence is a school-based inference. A survey of more than 1,100 parents, administrators, and teachers across twenty states and union territories found that private-school revenues fell by 20% to 50%, that at least 55% of teachers experienced salary cuts, and that most institutions reported a steep decline in new admissions (PTI, 2021); these magnitudes are school-sector figures, but they illustrate the same mechanism the higher-education evidence specifies. Public institutions, funded through salaries and budgets rather than current tuition, absorbed the shock with far greater stability. The divergence was therefore structural rather than a matter of managerial competence: institutions that lived on fees were exposed to a demand shock from which salaried institutions were largely insulated. This is resilience determined by resource base.

6. Human Resource Management under Crisis: Employment Security, Satisfaction, and Performance

Because the quality of education depends heavily on the preparation, effort, and morale of academic staff, the pandemic's effect on the workforce is not a side issue but a central management problem. A substantial human-resource literature links academic job satisfaction to institutional conditions—pay, workload, job security, supervisory support, and fair management—and identifies these as among the strongest predictors of commitment and performance in private universities (Masum et al., 2015). More recent evidence extends the point,

showing that workplace relationships and job satisfaction shape employee performance in private higher education, with satisfaction acting as a mediating pathway (Mohamed et al., 2024). The chain runs from conditions to satisfaction to performance: in higher education specifically, job satisfaction has been shown to be the mechanism that converts staff competence and motivation into sustained lecturer performance (He et al., 2026), which makes the security and pay that underpin satisfaction a direct determinant of institutional output rather than a welfare afterthought. Where institutions combine heavy workloads with insecure, low-paid contracts, the conditions that sustain good teaching are under strain even in normal times.

The pandemic intensified exactly these pressures, and did so unevenly. For private-sector staff, latent insecurity became realised loss: with revenues down and admissions falling, pay cuts and job losses were widespread (PTI, 2021). At the same time, the abrupt move online imposed new burdens on all academic staff. Evidence from India shows that teachers experienced heavier workloads, higher stress, and real difficulty adapting pedagogy to remote formats, frequently without adequate training or infrastructure (Dayal, 2023), and an exploratory factor analysis of online-teaching challenges identifies technological, pedagogical, and support-related obstacles that staff had to manage under time pressure (Siddiquei & Kathpal, 2021). These were not transient inconveniences: a longitudinal study of faculty found that work strain rose and remained elevated well into the pandemic, indicating a sustained erosion of working conditions rather than a brief spike (Cotter et al., 2024).

Read as human resource management, the pattern is a shock transmitted through the employment model. The private sector's reliance on insecure contracts, an efficiency device in stable times, became the channel through which financial distress reached teachers and, through them, students. This is the core mechanism of the review and the point at which resource dependence and contingency meet human resource strategy: employment security functions as a strategic human-resource resource and a source of organizational resilience, and institutions that shed or squeezed staff to protect the balance sheet drew down the human capital on which their educational value depends. The management implication, developed in Section 9, is that workforce stability is not merely an equity concern but a determinant of institutional performance under stress.

7. Digital Transformation and Adaptive Capacity: Public Platforms and Blended Learning

If finance and human resources explain the sectors' differing exposure, digital capability explains much of their differing capacity to adapt. The public sector's response drew on infrastructure built before the

crisis. India's national SWAYAM platform, with related public initiatives, allowed large-scale delivery of course content at little or no cost, and analyses of the government's e-learning response describe both its reach and its limits in higher education (Singh et al., 2021). Overviews of SWAYAM place it within the wider growth of massive open online courses in India, noting its role in widening access to structured content while flagging challenges of completion, quality assurance, and support (Jha & Harichandan, 2022). In resilience terms, this pre-built capacity was a form of adaptive capacity: an asset the system could draw on when it had to reconfigure delivery overnight, and one that lowered the effective price of continuing to learn for students already under cost pressure.

Beyond the immediate response, the pandemic accelerated a durable shift toward blended learning—deliberate combinations of face-to-face and online instruction supported by learning-management systems. Reviews of post-pandemic delivery modes argue that blended models, when well designed, can improve flexibility, access, and resilience, but that their effectiveness depends on institutional support, staff preparation, and equitable access to technology rather than on the technology itself (Imran et al., 2023). The qualification matters, because it locates the value of digital transformation in organizational capabilities—training, support, and management—rather than in tools alone. Digital transformation, on this reading, is not the purchase of platforms but the building of the human and organizational capacity to use them. Case evidence from higher education makes the point sharply: institutions that stayed afloat during the crisis did so less because they held more technology than because they achieved systemic coherence across their processes, aligning strategy, structures, and staff capability, so that digital transformation operated as an organizational competence rather than a set of tools (Antonopoulou et al., 2023). What distinguished institutions was their digital readiness—the capability, accumulated before the shock, to reorganise delivery at speed. Blended learning and online pedagogy were the visible surface of this transformation, but the durable managerial asset beneath them was the organizational capacity to build, govern, and sustain digital operations, and it is that capability, not the mode of instruction alone, that a management account should foreground.

That capacity was unevenly distributed, and here the evidence is sobering. The move online widened a pre-existing digital divide. Evidence from Tamil Nadu shows that access to devices, data, and a suitable study environment was distributed unequally, leaving many learners effectively excluded (Jafar et al., 2023), and a study of government and private primary schools in West Bengal describes the resulting provision as “lopsided,” with the capacity to deliver and receive digital learning concentrated

among better-resourced institutions and households (Sarkar et al., 2023). Adaptive capacity, in other words, was itself unequally held. The positive potential of blended learning and the negative reality of the digital divide are two faces of the same phenomenon, and which one dominates is a matter of management and policy, not of technology.

8. Synthesis: An Integrated Resilience Account

Read together through the three theories, the evidence yields a coherent account. Before the pandemic, the private sector's distinctive attributes—cost-efficiency and accountability, achieved through low-paid, insecure employment and funded by concentrated tuition income—were well fitted to a stable, growing market, and its measured performance advantages, though real on narrow indicators, were partly a product of selection (Kumar & Choudhury, 2021; Muralidharan & Kremer, 2008; Singh & Bangay, 2014). The government sector offered stable funding, secure employment, and broad access, with weaker performance incentives. The pandemic did not simply reveal which sector was “better”; it changed which attributes mattered. When fee income collapsed, resource dependence turned the private model's concentrated funding into acute financial vulnerability (Pavlov & Katsamakos, 2021;

PTI, 2021), and its insecure-employment model transmitted the shock straight to staff; meanwhile the public sector's salaried stability and pre-built digital capacity became more valuable exactly when households were under stress (ASER Centre, 2023; Singh et al., 2021). The national movement of enrolment toward government provision is the visible trace of this reconfiguration. Table 3 summarises the comparison across the review's dimensions.

The synthesis also clarifies what the evidence does not support. It does not support a blanket claim that government colleges provide uniformly higher-quality teaching than private colleges; the pre-pandemic evidence, if anything, points the other way on narrow measures of test performance and attendance (Muralidharan & Kremer, 2008), and it is drawn largely from schools. The defensible claim is narrower and specific to the crisis: the pandemic advantaged the sector whose financing and employment structures were more resilient to a sudden loss of fee income, and that resilience—together with affordability and free public content—drew students toward government institutions. Framed this way, the finding is not about the moral superiority of one sector but about the fit between organizational form and environment, which is the proper subject of contingency analysis.

Table 2 An Integrated Theoretical Framework for the Pandemic Shock to Higher Education

Theoretical lens	Core proposition	Mechanism during the pandemic	Primary theme
Resource dependence theory (Pfeffer & Salancik, 1978)	Dependence on a single, volatile resource heightens vulnerability to its disruption (P1)	Tuition-dependent private institutions lost their principal revenue as enrolment and fee flows contracted	Financial sustainability
Contingency theory (Lawrence & Lorsch, 1967; Donaldson, 2001)	Structures that fit a stable environment can become a misfit in a crisis environment (P2)	Low-cost, high-accountability, insecure employment shifted from strength to liability	HRM; institutional performance
Organizational resilience (Duchek, 2020)	Resilience rests on anticipation, coping, and adaptive capacity (P3, P4)	Salaried stability and pre-built public digital infrastructure enabled continuity and adaptation	Digital transformation; overall resilience

Table 3 Private and Government Higher Education across the Review's Dimensions, before and during the Pandemic

Dimension	Private sector	Government sector
Resource base	High dependence on tuition and current fees; concentrated, volatile revenue	Diversified public budgets and salaries; stable, insulated revenue
Cost structure	Low unit cost achieved through lean, low-paid staffing	Higher fixed personnel costs; defined pay scales
Human-resource model	Insecure contracts, weak tenure; accountability via enrolment and results	Tenure, allowances, security; weaker performance incentives
Financial sustainability under shock	Revenue contraction, falling admissions, distress	Greater stability; largely budget-insulated
HRM outcome	Pay cuts and job losses concentrated	Employment and pay largely protected

Dimension	Private sector	Government sector
	among staff	
Digital adaptive capacity	Fee-based delivery; uneven capability across institutions	Free public content via SWAYAM; pre-built capacity
Net resilience outcome	Lower short-run resilience; competitive position weakened	Higher short-run resilience; enrolment gains

Note. Some indicators (e.g., the enrolment shift and the survey of revenue and pay cuts) derive from the school sector and are treated as indicative for higher education.

Read against the four propositions, the evidence supports each to a differing degree, and the level of support should be stated plainly. Proposition 1—that concentrated tuition dependence heightens vulnerability to a demand shock—receives strong and convergent support, from higher-education financial modelling and analysis (Al Kharusi & Sree Rama Murthy, 2017; Pavlov & Katsamakas, 2021) and from the documented financing structure of Indian private institutions (Angom, 2019), with school-sector magnitudes pointing the same way (PTI, 2021). Proposition 2—that a configuration fitted to a stable market becomes a misfit in crisis—is supported analytically and by the observed reversal of the private sector's position, but it rests on interpretation rather than on a direct test of fit, and is therefore held to moderate support. Proposition 3—that employment security operates as a strategic resilience resource—receives moderate-to-strong support from the human-resource evidence linking security and satisfaction to performance in higher education (He et al., 2026; Masum et al., 2015; Mohamed et al., 2024) and from evidence of sustained faculty strain where conditions deteriorated (Cotter et al., 2024). Proposition 4—that pre-existing digital capability constitutes adaptive capacity—receives moderate support from the public-platform response and from case evidence on digital readiness (Antonopoulou et al., 2023; Singh et al., 2021), qualified by the unequal distribution of that capacity (Jafar et al., 2023; Sarkar et al., 2023). Table 4 records these judgements.

Table 4 Level of Support for the Review's Propositions

Proposition	Mechanism	Principal evidence	Level of support
P1 (resource dependence)	Tuition concentration raises financial vulnerability to a demand shock	Al Kharusi & Sree Rama Murthy (2017); Angom (2019); Pavlov & Katsamakas (2021); PTI (2021)	Strong
P2 (contingency)	A stable-market configuration becomes a crisis misfit	Muralidharan & Kremer (2008); observed reversal of sector positions	Moderate (analytical)
P3 (HRM and resilience)	Employment security is a strategic resilience resource	Cotter et al. (2024); He et al. (2026); Masum et al. (2015); Mohamed et al. (2024)	Moderate–strong
P4 (adaptive capacity)	Pre-existing digital capability buffers continuity, conditional on equity	Antonopoulou et al. (2023); Jafar et al. (2023); Sarkar et al. (2023); Singh et al. (2021)	Moderate

not a response improvised during the crisis but a

These propositions combine into a single integrated conceptual model. Ownership form is the antecedent: it sets an institution's resource base, its employment model, and its accumulated digital capability. Under stable conditions these three attributes jointly produce the private sector's efficiency advantage. When the pandemic changed the environment, the same attributes became the channels through which the shock was transmitted—resource dependence converting concentrated fees into financial distress (P1), the contingency misfit converting lean, insecure employment into workforce loss (P2, P3), and uneven digital capability determining whether instruction could continue (P4)—so that the net resilience outcome, and with it the movement of students between sectors, followed from the organizational configuration an institution had in place before the shock. Resilience, in this model, is

property built into the organization beforehand, which is why the managerial task is one of design rather than reaction.

9. Managerial and Policy Implications

The analysis carries concrete implications for the people who manage and regulate higher education, and these implications are the paper's principal contribution to management practice. They are organised below by stakeholder group and summarised in Table 5; each recommendation is tied to the theoretical account, and to the propositions it rests on, rather than to the crisis alone, which is what makes it portable to the next disruption.

9.1 For Institutional Leaders and University Administrators

For institutional leaders, the central lesson is resource dependence made practical: concentrated tuition income is a strategic risk, and reducing it is a resilience investment. Administrators of fee-dependent institutions should pursue revenue diversification—research income, executive and continuing education, philanthropy, partnerships, and endowment building—so that no single enrolment-linked stream can threaten solvency, which is the direct managerial answer to P1 (Al Kharusi & Sree Rama Murthy, 2017; Fowles, 2014; Pfeffer & Salancik, 1978). They should hold financial reserves and run scenario analysis and stress testing against demand shocks, treating a sharp fall in admissions as a planning case rather than an unthinkable event (Pavlov & Katsamakos, 2021). And they should build resilience as a capability in Duchek's (2020) sense—investing in the anticipation of threats, the capacity to cope when they arrive, and the flexibility to adapt afterwards—of which maintaining a standing portfolio of delivery modes, rather than reverting wholly to campus teaching, is one durable example. Because digital readiness proved to be an organizational capability rather than a stock of tools (Antonopoulou et al., 2023), leaders should invest in that capability continuously—governance, staff skills, and systems integration—so that it is available before the next disruption rather than assembled during it (P4).

9.2 For Human Resource Managers

For human resource managers, the evidence reframes employment security from a cost to be minimised into an asset to be managed. Because job security and fair pay are robust predictors of academic satisfaction and performance (Masum et al., 2015; Mohamed et al., 2024), and because work strain that is left unmanaged persists and deepens (Cotter et al., 2024), protecting the workforce during a shock is a way of protecting institutional capability—the practical import of P3, which treats employment security as a strategic human-resource resource rather than a discretionary cost. Practical measures include contingency mechanisms that spread rather than concentrate the burden of a downturn—reserve funds, temporary and shared

reductions in place of layoffs, and phased adjustments—alongside active management of workload and wellbeing during transitions. Human-resource strategy should also treat digital-pedagogy development as core professional development rather than an emergency add-on, so that staff carry adaptive capacity into the next disruption, and should attend to retention, since the faculty an institution loses in a crisis are expensive to replace when it recovers.

9.3 For Policymakers and Regulators

For policymakers and regulators, three priorities follow. First, the vulnerability of private-sector staff argues for minimum employment standards in fee-charging institutions and for mechanisms—emergency wage support, reserve requirements, or contingency financing—that stop a future demand shock from being absorbed entirely by the workforce. Second, the public sector's pandemic-era enrolment gains create both an opportunity and an obligation: attracting students is not the same as teaching them well, and the task is to convert enrolment growth into durable quality by strengthening accountability—clearer expectations, better feedback, and support for teaching—without sacrificing the security that draws staff to public employment (Muralidharan & Kremer, 2008). Third, and cutting across sectors, closing the digital divide is the precondition for the pandemic's genuine innovations to benefit all learners: public investment in connectivity, device access for disadvantaged students, and sustained professional development for blended pedagogy would help ensure that the shift the pandemic catalysed narrows rather than widens educational gaps (Imran et al., 2023; Jafar et al., 2023; Sarkar et al., 2023). Regulators should also extend routine monitoring to the higher-education level, since much of the strongest quantitative evidence still comes from schools. Taken together, these measures target at the level of the system the same organizational vulnerabilities the propositions identify within the institution: resource concentration (P1), workforce insecurity (P3), and uneven digital capability (P4).

Table 5 Managerial and Policy Implications by Stakeholder Group

Stakeholder	Key recommendations	Theoretical grounding
Institutional leaders and university administrators	Diversify revenue beyond tuition; hold reserves and run stress tests and scenario planning; build resilience capabilities (anticipation, coping, adaptation); keep a standing portfolio of delivery modes	Resource dependence; organizational resilience
Human resource managers	Treat employment security as a strategic asset; use contingency wage and reserve mechanisms instead of layoffs; manage faculty workload and wellbeing; make digital-pedagogy development core; protect retention	HRM; contingency theory
Policymakers and regulators	Set minimum employment standards for fee-charging HEIs; provide emergency financing; invest in connectivity and	Resource dependence; resilience; equity

Stakeholder	Key recommendations	Theoretical grounding
	device access; assure the quality of blended learning; extend monitoring to the HE level	

10. Limitations and Future Research

This review has limitations that bound its conclusions. As a narrative rather than a systematic review, it integrates evidence interpretively and does not follow a pre-registered protocol or a fully enumerated screening funnel, so selection effects cannot be excluded. It relies wholly on secondary sources and reports no primary data. Much of the strongest Indian comparative evidence concerns schools rather than colleges; applying it to higher education, though reasonable, is approximate, and the text flags each such instance. Some key indicators—most notably the enrolment shift toward government provision—derive from the school sector and from a small number of authoritative reports, and should be read as indicative for higher education. Where Indian college-level data were thin, the review drew on international higher-education evidence to examine the theoretical mechanisms, which aids the generalisation of theory but not of magnitudes. This reliance on school-level evidence for a few quantitative magnitudes—the enrolment shift and the survey of revenue and pay cuts in particular—is the review's most consequential limitation: the direction of the effects is well supported for higher education, but their precise size in the college and university sector remains to be established with institution-level data. Finally, the pandemic's aftermath continues to evolve, and the durability of the shifts described here is itself an empirical question.

These limitations set a research agenda, and the four propositions advanced here give it a clear shape by inviting direct empirical testing at the institution level, using college- and university-level data rather than the school-level proxies on which parts of this review necessarily rely. Panel and longitudinal designs could test P1 by relating tuition concentration and reserve adequacy to financial outcomes across a demand shock; matched public-private comparative studies could test P2 and P3 by tracking employment practices and staff outcomes through and beyond the crisis; and measures of institutional digital readiness could test P4 against the continuity of provision. Studies of this kind—including in hill and rural states such as Himachal Pradesh—would establish whether the largely school-based national patterns hold within higher education and persist over time, and would let management scholarship move from the analytical propositions offered here to estimated effects.

11. Conclusion

The COVID-19 pandemic passed a single shock through two differently built organizations and, in doing so, showed how much an institution's resilience depends on how it is financed and how it manages its people. In India, the private sector's reliance on concentrated tuition income and on insecure, low-paid employment—an arrangement that delivered cost-efficiency and accountability in stable times—became a channel of distress when fees fell, exposing staff to pay cuts and job losses and prompting families to move toward more affordable, more stable government institutions supported by free public content. The pandemic also accelerated a durable turn to blended learning while sharpening the digital divide, so that the same technology could widen access or widen inequality depending on how it was managed. The lesson is not that one sector is simply better than the other, but that the value of a higher-education system rests on organizational conditions—the security and morale of those who teach, and the adaptive capability the institution has built—that deserve deliberate design rather than improvisation. The paper's contribution to management is to show that an institution's resilience is largely determined in advance, by how it is financed, how it employs and manages its people, and how much adaptive digital capability it has accumulated, so that resilience is a matter of organizational design and not merely of crisis response. Diversifying revenue away from fragile fee dependence, treating employment security as a strategic asset rather than a discretionary cost, and building digital capability as a standing organizational competence are, on this account, the design choices that make a higher-education institution both more resilient and better able to serve its students when the next shock arrives.

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