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THE HYBRID EQUATION: MEASURING PRE- AND POST-PANDEMIC PRODUCTIVITY IN INDIAN BIG TECH

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ABSTRACT

The COVID-19 pandemic forced a rapid shift from traditional office settings to hybrid working models, yet objective long-term evidence of the model's impact on corporate productivity remains limited. This paper addresses that gap by comparing two five-year period within the Indian technology sector —the pre-pandemic era (FY 2015–FY 2019) and the post-pandemic hybrid era (FY 2021–FY 2025) while deliberately omitting the FY 2020 transition year. Drawing on secondary data from five leading Indian IT companies namely- Tata Consultancy Services, Infosys, Wipro, HCLTech, and Tech Mahindra, This study examines absolute revenue, operating margins, workforce attrition rates, and the evolution of psychological well-being frameworks across the decade. Spearman's rank correlation analysis on aggregated industry averages ($n = 10$) reveals a strong negative correlation between revenue scale and operating margins ($\rho = -0.84$, $p = 0.002$), confirming that margin compression accompanied industry scaling, while attrition showed no statistically significant monotonic relationship with either variable. The hybrid era coincided with accelerated revenue growth and broadly resilient margins. Attrition spiked sharply during the FY22–23 "Great Resignation" but settled by FY24–25 into a range broadly at or below pre-pandemic average. However, a modest uptick in FY25 points to a dynamic equilibrium rather than a continuous decline. The timing of this stabilization coincides with the maturation of proactive digital well-being programmes across the sector, though the secondary data design does not allow for causal inference. The paper concludes that the hybrid model, when backed by genuine investment in employee psychological health, has established itself as a viable high-productivity framework for India's digital economy.

Keywords: Hybrid Work Model; Decadal Analysis; Productivity Metrics; Indian IT Sector; Big Tech; Operational Performance; Workplace Psychology.

1. INTRODUCTION

The COVID-19 pandemic upended how the Indian technology sector — an industry built around sprawling corporate campuses — thought about where work gets done [1]. Before 2020, in-office presence was simply the default; efficiency and output were measured against it. The pandemic changed that calculus almost overnight. Forced into remote work, most organizations found that a complete return to the office was neither necessary nor desirable, and have since settled into hybrid arrangements that blend remote and on-site working [2,3].

What does hybrid work actually look like in practice? At its core, the model gives employees some freedom over where and when they work, rather than requiring them to be on-site

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during fixed hours [4]. International surveys confirm that this is not an India-specific trend — hybrid adoption has been widespread across economies [5]. Bloom et al. [6] go so far as to call it a "win-win-win": employers save on real estate and overhead, employees gain flexibility that improves their day-to-day quality of life, and there are broader societal benefits such as reduced commuting emissions. The framing is optimistic, but it raises a question — does the data actually bear it out?

There is also a psychological side to this shift that is easy to overlook. The traditional office, for all its rigidity, offered clear boundaries between work and personal life, along with built-in social support. Hybrid work complicates that picture. On one hand, greater autonomy has been linked to higher job satisfaction and lower daily stress [7]. On the other, prolonged remote working has surfaced real challenges — isolation, the blurring of work-life boundaries [9], and what Tarafdar et al. [8] term "technostress," the strain that comes from being constantly digitally connected. Any serious evaluation of hybrid work, then, cannot stop at revenue and margins; it needs to account for how companies are supporting (or failing to support) their people.

Much of the existing literature on hybrid work remains qualitative, praising its flexibility without testing whether that flexibility actually translates into sustained corporate performance. This paper attempts to fill that gap. We compare operational, financial, and human capital metrics across two five-year periods (FY15–19 and FY21–25), deliberately excluding FY20 transition year to avoid distortions from the initial lockdown. Drawing on secondary data from five of India's largest technology companies, our aim is to see whether the numbers support the narrative that hybrid work can match or exceed the productivity of the old model.

2. METHODOLOGY

2.1. Research Design

This study employs a comparative and descriptive longitudinal research design based on secondary data analysis [10]. The objective is to evaluate corporate productivity by comparing two distinct five-year blocks: the pre-pandemic baseline (FY 2015–2019) and the established hybrid era (FY 2021–2025). The transition year of FY 2020 was excluded to prevent the initial pandemic lockdown disruption from skewing the operational data.

2.2. Sample Selection

We utilized purposive sampling [11] to select a targeted group of organizations that best represent the broader industry shift. The sample consists of five leading, large-cap technology and IT services companies operating in India: Tata Consultancy Services (TCS), Infosys, Wipro, HCLTech, and Tech Mahindra. The selected companies have officially adopted a hybrid working model post-2021 and possess publicly available annual reports spanning both the pre-COVID and post-COVID eras.

2.3. Data Collection Sources

Data for this research was gathered from verified, publicly accessible corporate sources spanning the 10-year analytical timeframe. These include:

- Official Corporate Annual Reports and Investor Presentations (FY 2015 through FY 2025).
- Environmental, Social, and Governance (ESG) and Human Resources sustainability reports.

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2.4. Variables and Parameters Analysed

To objectively measure the impact of the hybrid shift, the analysis focuses on specific corporate metrics across the designated timeframe:

- **Financial Metrics:** Absolute revenue (to measure scale) and Operating Margin percentages (to measure operational efficiency and productivity). To ensure standardised comparison and eliminate the volatility of the INR-to-USD exchange rate over a decade, all financial metrics are reported in US Dollars [USD] as officially declared in the companies' consolidated financial statements.
- **Human Capital Metrics:** Last Twelve Months (LTM) attrition rates.
- **Psychological Indicators:** Corporate investments in mental health, employee well-being initiatives, and interventions to mitigate digital fatigue, as reported in ESG and sustainability disclosures.

2.5. Statistical Analysis

This study employs a correlational research design. Spearman's rank correlation coefficients (ρ) were calculated using the aggregated annual simple averages of the five firms across the 10-year dataset [12]. Industry averages were computed as simple means across the five companies for each fiscal year.

3. ANALYSIS AND FINDINGS

A comparative analysis of the top five Indian IT firms, contrasting the pre-pandemic office era (FY15–FY19) with the post-pandemic hybrid era (FY21–FY25), is presented below.

3.1. Longitudinal Financial and Operational Performance

Looking at the two blocks side by side, the hybrid era clearly coincides with faster industry growth. Revenue growth during FY15–19 was steady but moderate. The FY21–25 block, by contrast, shows noticeably steeper trajectories, partly because a geographically delinked workforce allowed firms to scale output without being constrained by the physical capacity of their campuses (Table 1A).

Revenue growth alone, though, only tells us about scale and not efficiency. Operating Margins (Table 1B) are a better lens for that, since they capture how cost-efficiently revenue is being generated. What stands out here is that margins held up reasonably well despite the heavy capital expenditure involved in moving to cloud-based, hybrid-ready infrastructure. TCS, for example, averaged roughly 25.8% in the pre-pandemic era and came in at around 24.9% across the hybrid years. Although there are exceptions such as Tech Mahindra's margin dropped to 6.1% in FY24, but that was driven by company-specific restructuring charges rather than anything inherent to hybrid work. On the whole, the data suggests the distributed model can operate at efficiency levels not far from what the old centralized setup achieved.

Table 1A: 10-Year Comparative Revenue Trend (in USD Billions)

Company	FY15	FY16	FY17	FY18	FY19	FY21	FY22	FY23	FY24	FY25
TCS	$16.2	$17.4	$18.7	$20.4	$22.1	$22.2	$25.7	$27.9	$29.1	$30.2
Infosys	$8.7	$9.5	$10.2	$10.9	$11.8	$13.6	$16.3	$18.2	$18.6	$19.3
Wipro	$7.1	$7.4	$7.7	$8.0	$8.6	$8.1	$10.4	$11.2	$10.8	$10.4
HCLTech	$6.2	$6.8	$7.4	$8.6	$9.9	$10.2	$11.5	$12.6	$13.3	$13.8

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Tech Mahindra	$3.8	$4.1	$4.4	$4.7	$5.0	$5.1	$5.7	$6.5	$6.1	$6.3

Note: All figures sourced from official consolidated financial statements reported in USD.

Table 1B: 10-Year Operating Margin Trend (%)

Company	FY15	FY16	FY17	FY18	FY19	FY21	FY22	FY23	FY24	FY25
TCS	26.4%	26.5%	25.7%	24.8%	25.6%	25.9%	25.3%	24.1%	24.6%	24.3%
Infosys	25.9%	25.0%	24.7%	24.3%	22.8%	24.5%	23.0%	21.0%	20.7%	21.1%
Wipro	22.2%	20.5%	18.0%	16.0%	16.0%	20.3%	17.7%	15.7%	16.1%	17.1%
HCLTech	21.1%	20.0%	20.3%	19.8%	19.5%	21.4%	18.9%	18.2%	18.5%	18.3%
Tech Mahindra	15.3%	14.3%	11.6%	14.7%	15.0%	14.2%	14.6%	11.4%	6.1%	9.7%

Note: Operating margins represent reported EBIT margins as per IFRS. Tech Mahindra FY24 figure of 6.1% reflects company-specific restructuring charges and is not representative of hybrid-model efficiency.

3.2. Human Capital Volatility and Stabilization

Attrition tells a more turbulent story. During FY15–19, turnover was relatively predictable. It tracked domestic hiring cycles and localized wage pressures, as one would expect it to be [13]. The post-pandemic years changed that dramatically. Once geographic barriers to job-switching fell away in FY22 and FY23, global talent competition drove attrition to levels the sector had not seen before, Wipro hit 23.8% and Tech Mahindra 24.0% in FY22 alone [14,15].

Note: A note on Infosys: the firm already reported 20.4% attrition in FY19, a pre-pandemic year, likely reflecting leadership transitions and internal restructuring at the time. That figure should be avoided to be read as a post-pandemic effect.

What matters more, however, is what happened next. FY24 saw a significant drop across all five firms as permanent hybrid structures were formalized, companies moved away from ad hoc remote arrangements toward deliberate, policy-backed flexible models. FY25 then told a slightly more complicated story as attrition ticked back up at four of the five companies (TCS, Wipro, HCLTech, and Tech Mahindra), with only Infosys edging marginally lower. But even with that uptick, four of the five firms remained at or below their pre-pandemic five-year averages, and TCS sat only marginally above its historical baseline. The picture, in other words, is not one of continuous decline but of a settling-in attrition finding a sustainable range rather than returning to a fixed historical norm. A meaningful finding in itself, that a formalized hybrid model appears to anchor retention within workable bounds.

Table 2: 10-Year Attrition Trend (LTM %)

Company	FY15	FY16	FY17	FY18	FY19	FY21	FY22	FY23	FY24	FY25
TCS	14.9%	15.5%	11.5%	11.0%	11.3%	7.2%	17.4%	20.1%	12.5%	13.3%
Infosys	18.9%	13.6%	15.0%	16.4%	20.4%	10.9%	22.7%	20.9%	14.4%	14.1%
Wipro	16.5%	16.1%	16.3%	16.8%	17.0%	12.1%	23.8%	19.2%	14.2%	15.0%
HCLTech	16.2%	17.3%	16.9%	15.5%	16.5%	9.9%	21.9%	19.5%	12.4%	13.0%
Tech Mahindra	19.0%	21.0%	17.0%	18.0%	19.0%	10.0%	24.0%	14.8%	10.0%	11.8%

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Note: Infosys FY19 attrition of 20.4% reflects company-specific leadership transition conditions in that year.

3.3. Evolution of Psychological and Well-being Frameworks

A look at ESG and sustainability reports across the two periods shows a clear shift in how these companies approached employee psychology, from something primarily tied to physical spaces to something delivered at scale through digital channels.

- **The Pre-Pandemic Block (FY15–19):** Psychological frameworks were heavily tethered to physical real estate. Corporate sustainability reports from this period primarily highlight infrastructural wellness, such as ergonomic compliance and physical recreational amenities designed to sustain employees during long campus hours.
- **The Hybrid Block (FY21–25)- Proactive Digital Scaling:** To combat the technostress [8] and attrition crisis of FY22, the industry fundamentally restructured its psychological investments. Rather than physical amenities, companies scaled proactive digital well-being frameworks with significant programmatic reach.
- **Programmatic Scaling:** By FY24, Infosys completely digitized its HALE (Health Assessment and Lifestyle Enrichment) platform, scaling its 24/7 Employee Assistance Programme (EAP) to cover over 300,000 globally distributed employees and conducting over 1,500 dedicated mental health interventions. Similarly, Wipro expanded its MITR counselling initiative from a localized campus offering to a globally accessible digital safety net covering its 230,000+ workforce. HCLTech achieved 100% global EAP coverage for its 225,000+ employees during this period [16].
- **Structural Boundary Setting:** To combat digital fatigue at the managerial level, TCS scaled its "TCS Cares" framework by proactively training over 10,000 managers as "Mental Health First Aiders" [17]. This structural intervention equipped leaders to identify remote burnout through digital communication patterns before it resulted in employee turnover.

It is worth noting that the timing of attrition stabilization in FY24–FY25 coincides with the period in which these digital well-being frameworks reached maturity. That does not prove causation, but the directional alignment is hard to ignore and we explore it further in the discussion.

3.4. Synthesis of the 10-Year Trend

The two five-year blocks paint a consistent picture. The pre-pandemic era was stable but ultimately constrained, growth was tethered to how much physical office space a company could build and fill. The hybrid era introduced real volatility, particularly around talent during FY22–23, but it also unlocked faster revenue scaling. By FY25, attrition had settled into a range broadly comparable to pre-pandemic levels, supported by deliberate policy choices around flexible work and employee well-being. The overall trajectory suggests that distributed work can sustain high productivity, provided it is backed by the right structures.

3.5. Statistical Correlation Matrix

To test the comparative observations statistically, a Spearman's rank correlation analysis was conducted on the aggregated industry simple averages across the 10-year dataset (n = 10).

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Table 3: Spearman's Rank Correlation Matrix (Industry Simple Averages, FY15–FY19 & FY21–FY25, excl. FY20)

Variables	Absolute Revenue	Operating Margin	LTM Attrition
Absolute Revenue	1.00	−0.84**	−0.24
Operating Margin	−0.84**	1.00	+0.02
LTM Attrition	−0.24	+0.02	1.00

*Note: ** indicates $p < 0.01$ (two-tailed). All other correlations are non-significant ($p > 0.05$). Values represent Spearman's rho (ρ) calculated on annual simple averages across the five sampled firms. n = 10 annual observations.*

Only one of the three pairings produced a statistically significant result: revenue and operating margins are strongly negatively correlated ($\rho = -0.84$, $p = 0.002$). In other words, as these companies grew bigger during the hybrid era, their margins tightened, which makes sense given the heavy spending on cloud infrastructure and digital transformation that the transition demanded. The other two relationships were weak and statistically insignificant. Attrition showed a slight negative association with revenue ($\rho = -0.24$, $p = 0.511$) and was essentially uncorrelated with operating margins ($\rho = +0.02$, $p = 0.947$). Neither result clears any conventional significance threshold. This, is not entirely surprising as attrition behaved in a non-linear way over this decade, spiking in FY22–23 before settling back down, and a monotonic rank correlation is simply not the right tool to pick up that kind of pattern. It is also important to acknowledge that ten annual observations is a small dataset; the statistical power here is limited, and these correlations should be treated as indicative rather than conclusive.

4. DISCUSSION

4.1. The Evolution of Operational Efficiency

In practical terms, the data shows that operational efficiency in the Indian IT sector may no longer depends on having everyone under the same roof. This aligns with broader research on geographic flexibility and knowledge-worker productivity [18]. Revenue growth accelerated in the hybrid era, and margins, while not identical to pre-pandemic levels have held up well enough to suggest that productivity was not materially harmed. TCS and HCLTech, in particular, stayed close to their historical margin bandwidths. One plausible explanation is that the savings from downsized office footprints helped absorb the costs of building out cloud infrastructure and digital security, allowing these firms to run distributed workforces without a significant hit to the bottom line.

4.2. Hybrid Flexibility as a Retention Mechanism

We can say that in hindsight, the attrition spike of FY22–23 was like a stress test. The sharp recovery in FY24 showed the sector could pull back from those extremes, while the modest FY25 uptick in four of five firms saw attrition rise slightly, suggesting the industry is settling into a new normal rather than simply returning to where it was before the pandemic. The key takeaway is that hybrid flexibility now appears baked into what employees expect from their employer. Any company trying to revert fully to the pre-2020 model would likely face a retention problem, given that structured flexibility has become, in Barrero et al.'s [19] framing, a standard part of the employment contract.

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4.3. The Imperative of Psychological Infrastructure

There is also a directional but not provably causal link between the sustained productivity seen in Table 1 and the steps these firms took to address digital fatigue [7]. The companies that maintained output during FY21–25 were, at the same time, overhauling their HR approach: moving away from campus gyms and on-site perks toward digitally accessible counselling, mental health training for managers, and structured policies against always-on work culture. Although We cannot draw a straight causal line from these programmes to attrition numbers using secondary data alone. But the timing lining up suggests attrition stabilized as these frameworks matured and the pattern seems consistent with what Mehta [20] and Srivastava et al. [9] describe as the moderating role of psychological support infrastructure in Indian IT work-from-home contexts.

5. CONCLUSION

The traditional office era of FY15–19 to the hybrid reality of FY21–25, points to a transition that, on balance, has worked. Revenue scaled faster, margins held up, and attrition, after a sharp and disruptive spike, settled back into a range that the sector can live with. What made this possible was not just the policy of letting people work from home a few days a week but also the accompanying investment in digital well-being infrastructure such as counselling platforms, the manager training, the deliberate effort to set boundaries around digital connectivity. The companies that did both appear to have come through the transition in better shape.

The hybrid model, in short, has moved past being a pandemic era fix. For companies willing to pair operational flexibility with genuine investment in their workforce's psychological health, it offers a framework that can scale. That being said, this study lacks the means to make any causal claims and thus, should not be seen as such. It would be future works, particularly primary surveys or quasi-experimental designed studies that would help pin down exactly how much of the stabilization we observe is attributable to the hybrid structure itself versus the well-being programmes, market cycles, or other confounding factors.

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