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Entrepreneurial ecosystems, digital transformation and business sustainability in creative industries: Stakeholder evidence from North India

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Abstract
This study evaluates stakeholder perceptions of the resources and challenges associated with a North Indian media production cluster. It analyses 400 survey records and a founder interview, separating perceived support from verified economic effects. Six composite scales show favourable average ratings and strong positive intercorrelations. Robust regression associate's infrastructure, education and digital adaptation with perceived sustainability (R^2 = .789), but common-method measurement and cross-sectional data prevent causal conclusions. The paper develops a bounded framework for analysing studio-centred creative ecosystems and outlines requirements for independent regional evaluation.

Keywords: Media entrepreneurship, North India, creative industries, Marwah Studios, stakeholder perceptions, entrepreneurial ecosystems, media education

Introduction

The management problem in this setting is not whether a studio or academy exists. It is whether access to shared facilities, skilled collaborators, finance, distribution, and rules for appropriating creative value forms a workable combination for independent firms. Media production has unusually variable demand. A documentary company may need a camera team for several weeks, then experience months without comparable contracts. A digital agency may grow its audience without gaining bargaining power over a distribution platform. Consequently, management analysis should distinguish capacity, opportunity, and realised performance. A survey about the first two cannot settle the third. This paper treats the Noida case as a setting for examining those distinctions rather than as proof of a successful regional development intervention.

The global relevance of this question extends beyond one Indian media hub. Small creative enterprises in many economies combine local production relationships with distant audiences, platforms, financiers, and intellectual-property markets. Regional clusters potentially reduce search and coordination costs, yet the same proximity may concentrate influence among established organisations. Digital distribution potentially broadens market access, yet it can expose small firms to unpredictable ranking systems and changing commercial terms. The coexistence of these mechanisms means that favourable stakeholder ratings must be interpreted against a theory of both opportunity and constraint (Spigel, 2017; Nambisan, 2017) [3, 16].

The creative economy presents a difficult measurement problem. Institutions may provide resources, visibility and networks, yet researchers cannot infer regional value creation from institutional presence alone. Production is project-based, contracts are temporary, and entrepreneurial performance depends on demand, financing, professional reputation and access to markets. The North Indian media sector is an instructive case because production facilities, formal training and digital distribution have developed together. This article studies stakeholder perceptions of the Marwah Studios and Asian Academy of Film and Television ecosystem in Noida, rather than treating the institution's promotional claims as established regional outcomes. The empirical contribution consists of a transparent reanalysis of 400 questionnaire records alongside a founder interview supplied for the doctoral project. The theoretical contribution is an explicit distinction between perceived ecosystem resources, perceived entrepreneurial outcomes and independently verified economic effects. This separation addresses a recurrent weakness in entrepreneurial ecosystem research, where descriptions of supportive conditions are sometimes interpreted as proof of entrepreneurial success (Stam, 2015; Stam & van de Ven, 2021) [1, 2].

The first research question asks how respondents evaluate infrastructure, digital transformation, opportunity, regional impact and sustainability. The second asks whether perceived infrastructure, education and digital adaptation are associated with perceived sustainability. The third asks what the case contributes to global discussions of creative-industry clustering when the limits of self-report measurement are taken seriously. This design intentionally avoids an unsupported claim that survey agreement establishes regional economic growth.

Literature review and theoretical positioning

An entrepreneurial ecosystem is not simply a collection of favourable attributes. Stam and van de Ven (2021) [2] emphasise interdependent elements whose effectiveness depends on how they operate together. In media production, the relevant complementarities might include equipment and

trained operators, producers and distributors, educational institutions and commercial clients, or production incentives and credible contracting rules. The presence of one component does not establish that the entire system works. This theoretical distinction matters when a questionnaire asks respondents to agree with positive statements about a prominent organisation. Responses reveal perceived legitimacy and resource availability, but the resulting scores are not equivalent to observed transactions between firms.

The resource-based perspective adds a firm-level question. A resource supports durable advantage when the enterprise has a meaningful way to organise and deploy it, rather than merely observing it nearby. A shared studio may lower initial fixed investment for a small producer, yet access fees, booking priorities, technical standards, and contractual conditions determine whether the resource improves competitive position. In a media cluster, institutional proximity is therefore a possible enabling condition. It is not itself an enterprise capability. This article uses ecosystem reasoning to interpret the regional environment and resource reasoning to specify the organisational decisions through which benefits might arise.

Entrepreneurial ecosystem scholarship explains why a venture's prospects depend on conditions beyond the entrepreneur. Stam (2015) [1] cautions against loosely specified causal claims, and Stam and van de Ven (2021) [2] operationalise regional ecosystem elements. Spigel (2017) [3] highlights the relational organisation of ecosystems. Creative-industry scholarship adds the centrality of networks and uncertainty in demand (Potts *et al*., 2008) [7]. Regional innovation studies show that proximity can support knowledge exchange but should not be reduced to geographic distance alone (Boschma, 2005; Gertler, 2003) [5, 6]. These perspectives justify a multi-component interpretation of studio-based media entrepreneurship.

The article adopts a resource-and-perception framework informed by entrepreneurial ecosystem theory. Infrastructure and training represent perceived enabling conditions, digital transformation represents perceived access to changing markets, and opportunity and sustainability are evaluative outcomes. The conceptual arrows describe hypotheses about association, not verified causal pathways. A high correlation between two survey scales may reflect shared real-world experiences, but it may also arise from similar question wording or respondents' favourable orientation toward the institution. The framework therefore includes a competing explanation: common evaluation and institutional affinity. The distinction between enabling conditions, respondent beliefs and independently observable outcomes is central to the paper's contribution. In a subsequent multi-site design, actual venture creation, employment, survival and sales should replace perceptual proxies as dependent variables.

Geographic concentration and creative production

The economics of shared infrastructure is particularly relevant to small media businesses. Production equipment has indivisible costs, becomes technologically obsolete, and is often required for short project windows. A rental or shared-service arrangement converts some fixed expenditure into project-specific expenditure. For a venture with uncertain demand, this may reduce the financial burden of entering a market. The advantage depends on actual prices, availability, reliability, and quality, none of which are independently measured in the present survey. Respondents' agreement that Noida offers cost advantages over Mumbai is therefore a judgement requiring future price comparisons, not an audited cost estimate.

Creative clusters also coordinate temporary teams. Editors, cinematographers, sound specialists, designers, actors, and marketing professionals often work across organisational boundaries. Geographic proximity can facilitate repeat interaction and trust, but it may also reproduce closed networks that disadvantage newcomers. The cluster literature identifies the importance of locally circulating knowledge alongside connections to distant markets (Bathelt *et al*., 2004) [4]. An adequate management assessment would therefore track who receives referrals, which firms win contracts, whether small enterprises retain intellectual property, and how access varies by gender, experience, and location.

A media cluster is more than a concentration of shooting floors. Production requires casting, editing, transport, equipment rental, legal services, commissioning contacts, and repeat exchanges among freelancers. The Noida case is analytically useful because these complementary activities can be investigated around a recognisable anchor institution. Yet proximity should not be mistaken for an automatic productivity gain. Boschma (2005) [5] distinguishes geographic proximity from cognitive, organisational, social, and institutional proximity. The survey measures perceived availability and value of the cluster, rather than independent output per worker. This distinction matters when translating local enthusiasm into regional policy.

Entrepreneurial ecosystems and institutional complementarities

Complementarity is a stronger claim than simple correlation. Two institutional inputs are complementary if the value of one rises in the presence of the other. For example, access to studio facilities may matter more when entrepreneurs have technical skills, and digital distribution may matter more when a venture can produce content at an acceptable cost. The survey contains separate ratings of infrastructure, education, and digital change, but does not record enterprise-level outcomes needed to estimate those complementarities directly. Regression among perception indices identifies shared evaluations rather than evidence that one resource increases the productivity of another.

The practical implication is that managers should evaluate bundles of services. A studio provider might monitor equipment utilisation, repeat bookings, client retention, and post-production turnaround. A training provider might monitor externally assessed competencies and subsequent paid work. A regional agency might track new firms, enterprise survival, contract values, and the geographical distribution of suppliers. Combining these indicators would permit a more defensible assessment of ecosystem effectiveness than an index of institutional approval alone.

Stam and van de Ven (2021) [2] frame entrepreneurial ecosystems as interdependent institutional and resource conditions. In a studio-based ecosystem, physical facilities and trained labour are potentially complementary, but their simultaneous presence does not prove that one produced the other. The empirical indicators used here represent stakeholder evaluations of infrastructure, training, opportunity, digital adaptation, and sustainability. Their correlations show a coherent perception structure. They do

not identify a causal ecosystem mechanism. A stronger causal design would compare venture outcomes before and after access to facilities, or contrast matched enterprises with different levels of ecosystem participation.

Local knowledge and global production networks

A regional media venture can simultaneously depend on local tacit knowledge and global market access. The former includes familiarity with crews, language, production practices, and location logistics. The latter includes cross-border commissioning, online licensing, and distribution through platforms whose governance lies outside the region. Boschma (2005) [5] cautions against treating geographical proximity as sufficient for innovation. Cognitive, organisational, and institutional forms of proximity may matter as much as physical distance. A media entrepreneur who can negotiate a remote commission and coordinate a distributed editing team may obtain benefits without permanent co-location.

This dual geography makes the North Indian case useful for international comparison. Studies should avoid a binary choice between local clusters and digital markets. Instead, they should ask which activities remain place-dependent, which tasks move across borders, and who captures the resulting value. The survey's digital-transformation items concern perceived access and technological change, not the proportion of sales earned internationally. Their high mean is consistent with a favourable perception of digital possibilities but cannot establish cross-border commercial success.

Creative producers operate through both face-to-face relationships and geographically dispersed commissioning networks. Bathelt *et al*. (2004) [4] describe local interaction and external knowledge pipelines as complementary mechanisms. For Noida, local crews may facilitate rapid production coordination, whereas remote distribution platforms potentially widen access to clients. The survey items capture positive perceptions of digital distribution and regional networks, but do not track actual overseas contracts. International comparisons should therefore focus on how intermediary institutions connect locally embedded talent to distant demand rather than claiming measured export growth.

The problem of anchor-institution attribution

Anchor organisations can provide infrastructure, legitimacy, training, and convening opportunities. Their prominence, however, complicates evaluation. Respondents may associate an entire regional industry with the institution most visible to them, even when numerous broadcasters, independent producers, educational providers, and public agencies contribute to growth. A founder interview is valuable for reconstructing intentions and organisational choices, but the interviewee has privileged knowledge of internal decisions and a direct interest in institutional reputation. Those features should be disclosed as part of the case's evidence structure.

A stronger attribution strategy would compare developments before and after relevant investments, examine contemporaneous records, and include firms with different levels of association with the anchor organisation. It would also look for counterexamples: ventures that prospered without the institution, and ventures that accessed its services but failed. This is not an argument against the institution. It is a standard for distinguishing an important participant in a regional system from the sole cause of regional change.

A case organised around Marwah Studios risks attributing a regional transformation to a single organisation. The founder interview documents one participant's account of institutional creation, perceived labour shortages, and early television demand. Such testimony is important historical evidence but is not independent verification of every milestone or counterfactual claim. Competing influences include public infrastructure, market liberalisation, private broadcasters, regional labour mobility, and the wider growth of digital distribution. This article treats Marwah Studios as an illustrative anchor within a multi-actor regional system, not as the sole origin of North Indian media entrepreneurship.

Regional inequality and sample concentration

The sample design concentrates respondents in and around the core production region. That concentration is substantively understandable because the study concerns a Noida-centred institution, but it affects the claims that follow. Stakeholders close to the cluster may have more direct experience with facilities, alumni networks, and studio clients. Respondents in smaller cities may evaluate the same organisation through reputation or mediated exposure. Comparing the two groups requires attention to the type and intensity of contact, not only to geographical labels.

The absence of a probability sampling frame means that an apparent difference between regional groups is not automatically a population difference. A quota design may achieve useful variation without providing known selection probabilities. Even statistically significant contrasts may reflect differences in professional roles, association with the institution, or recruitment channels. For management scholarship, these issues are consequential because recommendations for regional policy should not be based on a sample whose composition favours the most visible cluster.

The regional distribution of respondents is concentrated around the core cluster. This is appropriate for studying a case-centred ecosystem but limits claims about North India as a whole. Perceptions in the core may differ systematically from those of producers operating at greater distance. The study cannot estimate regional employment multipliers or infer effects for firms not represented in the sample. Future comparative work should use an independent enterprise frame, measure travel time to facilities, and document costs and completed projects. Those indicators would connect ecosystem theory to tangible spatial inequality.

Platform transformation and entrepreneurial risk

Digital platforms change the sequence of entrepreneurial activities. A small producer can distribute content before securing a conventional broadcaster, observe audience response, and adjust subsequent offerings. Nambisan (2017) [16] explains how digital technologies alter the boundaries and uncertainty of entrepreneurial processes. Yet a platform account, follower count, or video view is not a stable revenue stream. Commercial viability depends on monetisation eligibility, contract terms, audience conversion, advertising demand, rights ownership, and the cost of continued production.

Platform dependence also creates governance risks. Search and recommendation algorithms can change without consultation with individual creators. Revenue-sharing terms may shift, accounts may be suspended, and content can be copied or redistributed. A management-oriented study should distinguish the perceived availability of digital channels from control over the value generated through those channels. The present instrument asks about both opportunity and risk, but its composite indices do not isolate those dimensions cleanly. This motivates item-level interpretation and careful avoidance of claims about measured digital business performance.

Online video distribution changes market entry conditions, but the relationship between digital access and enterprise survival is not straightforward. Lower publication costs may coexist with intense competition, unstable recommendation systems, and dependence on platforms that creators do not control. The digital transformation scale contains optimistic items about access and global reach, while the sustainability scale also includes concern about algorithmic volatility. Their positive association should not be interpreted as proof that digital platforms reduce risk. A nuanced reading recognises that creators may perceive both opportunity and exposure to uncertainty.

Policy support, copyright and operating conditions

Creative-enterprise policy is often evaluated by counting facilities, festivals, subsidies, and production announcements. A more useful managerial assessment asks whether these instruments change the cost, predictability, or profitability of operating a venture. A filming incentive has limited value if payments are delayed or eligibility rules are opaque. A single-window clearance mechanism helps only when approval time and administrative burden actually decline. Similarly, a festival or networking event contributes to enterprise development when introductions produce measurable partnerships or commissions.

Intellectual property is central to value appropriation. Producers and independent creators must decide who owns raw footage, derivative works, distribution rights, and future licensing income. The survey's statements about copyright concern respondents' perceptions of risk rather than observed infringements. Those concerns nevertheless identify an area for managerial inquiry: whether small firms possess the legal knowledge and bargaining power to negotiate rights effectively. Research connecting policy and business outcomes should collect documentary evidence of contracts, approvals, subsidy receipts, and dispute resolution.

Film subsidies and single-window clearances are perceived enablers rather than independently observed policy effects in this dataset. Similarly, survey agreement with statements about intellectual property concerns is not an estimate of infringement prevalence. These items belong to a broader discussion of operating conditions. A policy evaluation would require dates of subsidy eligibility, application records, permit processing times, and comparisons across jurisdictions. The current evidence is most valuable as a map of which institutional issues stakeholders consider salient.

The role of networks in opportunity recognition

Professional networks matter because many media contracts originate through reputation, referrals, and repeated collaboration. Such relationships can reduce uncertainty about skill and reliability, especially when work is project-based. A studio-linked educational institution may create connections among students, instructors, alumni, clients, and suppliers. Yet the mere existence of a network does not show that it is inclusive or economically productive. Network effectiveness depends on the quality of ties, access to decision makers, and the conversion of introductions into paid opportunities.

An empirical network study would identify actual collaborations, distinguish strong from weak ties, and trace contract referrals over time. It would examine whether graduates gain access to independent clients or remain dependent on a narrow institutional circle. Such measures would permit a stronger test of the relational ecosystem argument advanced by Spigel (2017) [3]. The current survey supports only the narrower finding that respondents express favourable assessments of networking opportunities.

Entrepreneurial opportunities often emerge through repeated interactions with clients, mentors, and collaborators. Potts *et al.* (2008) [7] explain creative industries as markets shaped by social networks and uncertain demand. In the present case, studio access, festivals, alumni contacts, and digital networks are plausible channels for discovery. Survey agreement regarding these channels suggests perceived usefulness, but does not establish the number or quality of contracts generated. A follow-up network study should map referrals, collaborations, and repeat transactions to distinguish reputational visibility from measurable entrepreneurial activity.

Employment claims and measurement boundaries

Employment and entrepreneurship are not interchangeable outcomes. A new media graduate may enter a salaried position, work as a freelancer, establish a registered production firm, or combine several income sources. A regional cluster may increase the number of short assignments without improving annual income stability. Consequently, an assertion that a studio ecosystem creates jobs requires a clear definition of employment, a time horizon, and evidence from payrolls, contracts, or labour-force surveys.

The survey contains items asking respondents to agree with statements about employment and allied-sector growth. These responses are relevant as beliefs about local development, but they cannot independently verify job totals or net economic impact. A stronger design would separate direct studio employment, indirect supplier activity, induced local spending, and displacement from competing regions. Without these distinctions, claims of economic impact risk counting the same activity more than once or attributing wider sectoral changes to one institution.

Respondents generally agree that the cluster has contributed to local employment and allied activities. Such judgements are relevant to the perceived legitimacy of regional media investment. They are not equivalent to payroll data, job counts, or input-output estimates. An independent employment assessment would separate direct studio workers, contract crews, students, temporary service providers, and jobs displaced from other regions. It would also distinguish gross job creation from net additional employment. Without these observations, the article confines its claims to stakeholder assessments of socio-economic impact.

Comparative significance beyond India

The case can inform international management research without assuming that its institutional configuration is universally replicable. Production centres differ in labour regulation, public financing, distribution concentration, education systems, and intellectual-property enforcement. An integrated commercial studio and academy might be useful in a market where professional training and production facilities are scarce. The same model might be less appropriate where strong public institutions, unions, and independent production networks already exist.

Comparative research should therefore specify the conditions under which an anchor organisation improves access for smaller ventures. Candidate conditions include transparent rental arrangements, meaningful training placements, independent client demand, inclusive network governance, and routes to digital distribution. The international contribution is a set of questions about how resources are organised and converted into enterprise outcomes, rather than a claim that a single organisational form constitutes a transferable best practice.

Creative production clusters have emerged under different institutional conditions worldwide. The transferable question is whether an anchor studio combined with education and networks can reduce entry barriers for emerging producers. The Noida case offers a setting in which these components are visibly co-located and positively evaluated. Generalisation must remain analytical rather than statistical: researchers in other regions should test the proposed relationships using independent firm-level outcomes and comparable institutional measures. The value of the case lies in refining questions for cross-regional comparison, not claiming that a single cluster provides a universal blueprint.

Research design and data

The quantitative source is a 400-record workbook containing nine background questions and 36 five-point agreement items. Each respondent has one record. The six blocks each contain six items: studio infrastructure (C1), media education and incubation (C2), entrepreneurship opportunities (C3), digital transformation (C4), socio-economic impact (C5), and policy, challenges and sustainability (C6). Items were coded from 1 to 5 and arithmetic means were calculated within each block. All 400 records contained complete responses to the 36 scale items. Reliability was assessed using Cronbach's alpha, and Pearson correlations described bivariate associations. Ordinary least squares models used heteroskedasticity-robust HC3 standard errors. Because the observations are cross-sectional and the outcomes are respondents' perceptions, regression coefficients are associational rather than causal. The supplied methodology describes purposive quota recruitment across North Indian stakeholder categories. The workbook itself does not independently verify recruitment procedures or sampling probabilities. Accordingly, inferential tests describe patterns within the observed sample rather than design-based population estimates. The interview transcript records Dr. Sandeep Marwah's retrospective account of studio development and the formation of AAFT. The interview is analysed as attributed founder testimony, not as independently corroborated archival history. The transcript has transcription inconsistencies and was not treated as a source of verbatim publishable quotations without audio checking.

For transparency, C1 uses questionnaire items 10–15, C2 items 16–21, C3 items 22–27, C4 items 28–33, C5 items 34–39, and C6 items 40–45. A high score means agreement with the statements as worded. The final block combines supportive policy and sustainability statements with perceived challenges. It is therefore an agreement index rather than a pure measure of observed sustainability. All analyses use the 400 complete records. The original workbook includes identifiable respondent fields, which are excluded from the reporting dataset.

Results

Table 1: Descriptive statistics and scale reliability (N = 400)

Construct	Mean	SD	Cronbach alpha
C1	4.207	0.596	0.828
C2	4.171	0.598	0.823
C3	4.154	0.583	0.827
C4	4.228	0.565	0.817
C5	4.177	0.585	0.826
C6	4.140	0.611	0.836

C1 = infrastructure; C2 = education; C3 = opportunity; C4 = digital transformation; C5 = socio-economic perceptions; C6 = mixed policy, risk and sustainability-perception statements. Higher scores indicate stronger agreement, not observed performance.

Table 2: Correlations among six composite scores

Scale	C1	C2	C3	C4	C5	C6
C1	1.000	0.828	0.828	0.825	0.836	0.844
C2	0.828	1.000	0.816	0.808	0.829	0.829
C3	0.828	0.816	1.000	0.829	0.812	0.832
C4	0.825	0.808	0.829	1.000	0.808	0.826
C5	0.836	0.829	0.812	0.808	1.000	0.828
C6	0.844	0.829	0.832	0.826	0.828	1.000

Table 3: Exploratory HC3-robust regression coefficients

Outcome	Predictor	b	95% CI	p
C6 (R^2=0.789)	C1	0.367	[0.266, 0.468]	1.03e-12
C6 (R^2=0.789)	C2	0.305	[0.209, 0.401]	4.42e-10
C6 (R^2=0.789)	C4	0.313	[0.218, 0.408]	1.18e-10
C3 (R^2=0.772)	C1	0.306	[0.207, 0.405]	1.3e-09
C3 (R^2=0.772)	C2	0.268	[0.183, 0.354]	7.53e-10
C3 (R^2=0.772)	C4	0.361	[0.274, 0.448]	3.96e-16

The regression coefficients describe associations among same-source perceptual indices. The C6 index mixes perceived policy support, risks, and normative claims and is not a validated measure of business sustainability. High correlations complicate separation of constructs.

The supplied founder transcript provides a distinct form of evidence. Dr. Sandeep Marwah recounts an early shortage of trained personnel, the creation of a studio-linked training institution, engagement with Sadhan Malik and Jagjit Singh, and the perceived relationship between professional training and television production demand. These recollections help identify decisions and motivations from an insider perspective. The transcript alone does not verify the full chronology, market-wide impact, or numerical claims about graduate employment. No quotation is reproduced verbatim because the supplied transcript contains evident transcription errors and has not been checked against the audio recording.

Discussion

The strongest empirical result is the consistency of favourable responses across several domains. The main interpretive challenge is that consistency may reflect genuine interdependence, common exposure to a visible institution, or a general tendency to endorse positively framed statements. Those explanations are not equivalent. The study therefore treats the survey as evidence about a pattern of stakeholder evaluation and the interview as evidence about the founder's account of organisational development. Neither evidence source independently validates regional business performance.

The distinction is important for management theory. An ecosystem is valuable to firms when resources and institutions support productive activity. Stakeholder approval may help explain legitimacy and perceived access, but approval is not the same as market entry, innovation, profitability, or survival. The analytical task is to connect these levels without collapsing them. In this respect, the findings complement ecosystem research by illustrating how measurement choices shape the conclusions available from a regional case (Stam & van de Ven, 2021) [2].

The empirical pattern is best understood as a coherent and favourable evaluation of a studio-centred entrepreneurial environment. The high R^2 in the sustainability model is notable, but its interpretation is constrained by common survey method, conceptual overlap and institutional affiliation. The results support the limited statement that stakeholders who evaluate infrastructure, education and digital adaptation more positively also tend to evaluate sustainability more positively. They do not establish that the facilities created jobs, increased productivity or improved regional firm survival. The contribution to ecosystem research is therefore methodological as well as substantive: it demonstrates why a distinction between perceived enabling conditions and observed outcomes must remain visible throughout case-based analysis.

Interpretive implication: geographic concentration and creative production

A rigorous interpretation must ask what observation would disconfirm the proposed explanation. A media cluster is more than a concentration of shooting floors. Production requires casting, editing, transport, equipment rental, legal services, commissioning contacts, and repeat exchanges among freelancers. The Noida case is analytically useful because these complementary activities can be investigated around a recognisable anchor institution. Yet proximity should not be mistaken for an automatic productivity gain. Boschma (2005) [5] distinguishes geographic proximity from cognitive, organisational, social, and institutional proximity. The survey measures perceived availability and value of the cluster, rather than independent output per worker. This distinction matters when translating local enthusiasm into regional policy.

Interpretive implication: local knowledge and global production networks

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Interpretive implication: regional inequality and sample concentration

A rigorous interpretation must ask what observation would disconfirm the proposed explanation. The regional distribution of respondents is concentrated around the core cluster. This is appropriate for studying a case-centred ecosystem but limits claims about North India as a whole. Perceptions in the core may differ systematically from those of producers operating at greater distance. The study cannot estimate regional employment multipliers or infer effects for firms not represented in the sample. Future comparative work should use an independent enterprise frame, measure travel time to facilities, and document costs and completed projects. Those indicators would connect ecosystem theory to tangible spatial inequality.

Interpretive implication: policy support, copyright and operating conditions

A rigorous interpretation must ask what observation would disconfirm the proposed explanation. Film subsidies and single-window clearances are perceived enablers rather than independently observed policy effects in this dataset. Similarly, survey agreement with statements about intellectual property concerns is not an estimate of infringement prevalence. These items belong to a broader discussion of operating conditions. A policy evaluation would require dates of subsidy eligibility, application records, permit processing times, and comparisons across jurisdictions. The current evidence is most valuable as a map of which institutional issues stakeholders consider salient.

Interpretive implication: employment claims and measurement boundaries

A rigorous interpretation must ask what observation would disconfirm the proposed explanation. Respondents generally agree that the cluster has contributed to local employment and allied activities. Such judgements are relevant to the perceived legitimacy of regional media investment. They are not equivalent to payroll data, job counts, or input-output estimates. An independent employment assessment would separate direct studio workers, contract crews, students, temporary service providers, and jobs displaced from other regions. It would also distinguish gross job creation from net additional employment. Without these observations, the article confines its claims to stakeholder assessments of socio-economic impact.

Practical and policy implications

Managers of production facilities should monitor actual use rather than rely exclusively on reputational measures. A practical dashboard would record the number and size of independent clients, utilisation rates, repeat bookings, technical service failures, project completion times, and the

proportion of bookings from outside the immediate cluster. Where training and production share a location, administrators should also distinguish student practice from commercial client work and assess whether access arrangements favour established firms.

For emerging entrepreneurs, the findings point to the need for explicit resource planning. Shared facilities lower some entry barriers only when pricing, scheduling, and technical support align with project cash flows. Digital distribution expands possible routes to audiences but adds platform and rights-management risks. Entrepreneurs should maintain diversified client relationships, written intellectual-property agreements, and financial reserves appropriate to irregular commissions. These are management implications derived from the theoretical interpretation, not interventions tested in the survey.

Public agencies should evaluate the distribution of benefits across firms and locations. Reporting only investment announcements or total events organised does not reveal whether smaller ventures obtain sustained business. Policy evaluation should combine administrative records with independent firm surveys and should distinguish direct beneficiaries from businesses that merely operate in the same geographical area.

Policymakers should evaluate media clusters using both resource inventories and observable outcomes. Useful measures include the number of active independent enterprises, completed productions, repeat commissions, paid workdays, firm survival, and the share of contracts reaching regional creators. Studio operators should document facility access, pricing transparency, mentorship arrangements and links to external commissioners. Public agencies should evaluate incentives against independently verified additional activity rather than relying on institutional visibility or survey satisfaction. These measures would allow the perceived strengths identified here to be assessed against economic evidence.

Limitations and future research

The sample is non-probabilistic, and the data are cross-sectional. Each questionnaire item is an agreement statement, with multiple items explicitly naming Marwah Studios or AAFT. This institutional framing may increase positive response tendencies. The six composite scales exhibit substantial covariance, which is compatible with a shared underlying evaluative factor. Cronbach's alpha establishes neither unidimensionality nor discriminant validity. Exploratory regressions should therefore be understood as descriptive decompositions of associated responses rather than tests of independent causal mechanisms.

The sixth block is particularly difficult to label as business sustainability. Its items combine favourable views of film policy and administrative clearance with concerns about copyright and algorithmic volatility, a statement about equipment modernisation, and an overall benchmark judgement. Agreement with a risk statement is not conceptually equivalent to agreement that an enterprise is sustainable. A simple arithmetic average of these six items cannot serve as an unambiguous measure of realised sustainability. This article reports the block transparently as a policy, challenges, and sustainability-perception index and avoids using its regression as evidence of firm survival.

Future research should predefine the unit of analysis and collect actual enterprise outcomes. A longitudinal firm panel could measure revenue, client concentration, survival, investment, intellectual-property ownership, and employment quality. Independent records of facility access, alumni business formation, and public incentive uptake would help test whether proposed institutional complementarities have economic consequences. Qualitative interviews should extend beyond the founder to competing studios, freelancers, employers, and firms that exited the market. The resulting evidence would support more demanding comparisons among creative-industry clusters.

Several limits affect interpretation. The six composite measures are positively correlated, raising questions about construct distinctiveness and a possible general evaluative response tendency. Alpha estimates assess internal consistency, not dimensionality or validity. The survey includes statements that mix positive achievements, opportunities and perceived risks. Reverse scoring is not automatically appropriate for risk items because agreement may represent awareness rather than an unfavourable overall assessment. Some outcomes overlap conceptually with the predictor blocks, and this may inflate explanatory fit. No objective business outcomes, verified jobs, project revenues, firm survival records, or before-and-after measures were supplied. The sample was not a probability sample of North Indian entrepreneurs. The case also has an affiliation-sensitive setting in which institutional loyalty or social desirability might influence responses. The founder’s account is historically valuable but requires independent documentary triangulation. Consequently, the findings should not be generalised as verified economic effects or evidence that Marwah Studios caused regional development.

A next-stage study should preregister its primary outcomes and distinguish exploratory from confirmatory analyses. The questionnaire should be refined through cognitive interviews and factor analysis, followed by a separate validation sample. Multiple sources of evidence should be collected at different times to reduce same-source bias. Where appropriate, researchers should examine mediation only after establishing temporal order and measurement validity. Interviews with graduates, employers, competing studios, and independent producers would diversify perspectives beyond the anchor institution. These recommendations identify the evidence needed to test the present argument and should not be misread as procedures already performed.

Finally, the distinction between a favourable ecosystem and a resilient enterprise has implications for strategic planning. An entrepreneur may benefit from local equipment rental and professional referrals yet remain vulnerable to one dominant customer or platform. Resilience requires a portfolio of clients, defensible contractual rights, reliable collaborators and the capacity to adjust costs when commissions decline. The present data do not measure those capacities. Nevertheless, identifying them clarifies the theoretical pathway from regional resources to enterprise performance. The proposed interpretation therefore treats ecosystem conditions as possible inputs to strategic action, not substitutes for evidence of successful business management.

Measurement design should also reflect the changing composition of media entrepreneurship. A sole proprietor

producing social videos, a documentary collective, a television services company and a software-assisted post-production firm face different capital requirements and revenue risks. Aggregating their experiences under a single sustainability index obscures those differences. Future instruments should ask separately about business registration, years of operation, annual turnover bands, employee and freelance headcounts, ownership of production equipment, platform revenue, client concentration and debt obligations. These indicators would permit comparisons between business models while protecting commercially sensitive details.

A further managerial issue concerns the distinction between ecosystem visibility and enterprise inclusion. An organisation may attract prominent productions and generate positive publicity without ensuring that smaller suppliers participate on favourable terms. Procurement records, contract duration, supplier diversity, payment delays and dispute outcomes offer more informative measures of inclusion than broad agreement with claims of regional success. Comparing those indicators across established and emerging firms would also reveal whether the benefits of shared infrastructure reach entrepreneurs who lack prior professional connections. This distinction matters internationally because cluster strategies often prioritise flagship projects, whereas small-enterprise development depends on recurring commercial opportunities and manageable financial exposure.

Conclusion

This study provides a management-oriented account of how stakeholders assess a studio-centred creative-industry ecosystem in North India. Across 400 survey records, the reported evaluations of infrastructure, education, opportunity, digital change, socio-economic effects, and policy conditions are favourable and strongly correlated. The pattern is consistent with an integrated perception of the local media environment. It does not demonstrate that the ecosystem caused firm growth or that particular resources independently improved commercial sustainability.

The central theoretical contribution is the separation of perceived ecosystem support from the mechanisms through which firms obtain resources and from verified business outcomes. Entrepreneurial ecosystem theory emphasises interdependent regional conditions (Stam & van de Ven, 2021) [2], relational scholarship explains how access depends on networks (Spigel, 2017) [3], and digital entrepreneurship research shows why distribution technologies alter both opportunity and uncertainty (Nambisan, 2017) [16]. Together these perspectives suggest a research agenda focused on resource access, organisational capability, value appropriation, and measurable enterprise performance. The Noida case supplies a grounded setting for that agenda, with clear boundaries on what the available evidence establishes.

The North Indian case shows a strong positive pattern in stakeholder evaluations of infrastructure, education, digital adaptation and entrepreneurial sustainability. The survey cannot establish regional economic causality, but it provides a clear account of the perceptions that shape an anchor institution's legitimacy. The paper contributes a bounded interpretation of creative-industry ecosystems and a measurement agenda for comparing perceived resources with independent enterprise outcomes.

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