

Reforming Pakistan's Copyright Law for Generative AI: A Human Creative Control Framework

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Abstract

Pakistan's Copyright Ordinance 1962 does not expressly address AI-assisted works, autonomous machine output, prompt-based creation, training data or platform responsibility. This paper develops a reform framework suited to Pakistan's legal system and digital economy. It uses doctrinal and normative analysis informed by comparative approaches to identify gaps in authorship, originality, ownership, registration, evidence, training-data licensing, liability and remedies. The paper recommends that AI systems should not be recognized as authors; copyright should protect only identifiable human expression in AI-assisted and hybrid works; and substantially autonomous output should remain outside ordinary copyright. It proposes a Human Creative Control Test focused on human choices, the role of AI as a tool, intellectual shaping of the final work, identifiable contribution and non-infringement. Reform should also require proportionate disclosure of material AI use, preserve prompt and editing evidence, support collective licensing for commercial training, create limited research exceptions based on lawful access, and allocate liability according to control, knowledge and benefit. A staged implementation led by IPO Pakistan, followed by statutory amendment and institutional capacity building, can protect creators while supporting responsible innovation.

Keywords: Pakistan; generative AI; copyright reform; human creative control; training data; registration.

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1. Introduction

Pakistan's expanding use of generative AI in freelancing, software, publishing, education and media makes copyright reform an immediate institutional question. This paper develops a human-centred framework that protects genuine human creativity, supports lawful innovation and avoids monopolies over raw machine output.

The need for reform is particularly strong in Pakistan. The Copyright Ordinance, 1962 remains the principal copyright statute. Although it protects literary, dramatic, musical and artistic works, cinematographic works, records and computer programs, it does not define AI-generated works, AI-assisted works, prompt-based authorship, machine learning, training data, model outputs, algorithmic copying or platform liability. Pakistan's National Artificial Intelligence Policy 2025 signals the state's ambition to build an AI ecosystem, but copyright law must support that ambition by giving legal certainty to creators and technology companies. Without reform, Pakistan may become dependent on foreign platform terms and foreign litigation trends rather than developing a coherent local framework.

2. Research Method

The paper applies doctrinal and reform-oriented analysis to the Copyright Ordinance 1962, the National Artificial Intelligence Policy 2025 and comparative lessons summarized in the source thesis. It evaluates legal rules by clarity, compatibility with human authorship, evidentiary practicality, effects on creators and developers, and Pakistan's institutional capacity.

3. Gaps in the Existing Copyright Framework

The first gap is definitional. Existing copyright statutes generally define works, authors and owners, but they do not clearly define AI-generated work or AI-assisted work. This distinction is necessary because the legal consequences should differ. A work created by a human with AI support should not be treated like a work generated autonomously by a machine. Without definitions, courts may use inconsistent terminology and parties may manipulate labels. A platform may describe outputs as user-created for liability purposes but AI-generated for technical purposes. A user may describe a raw output as authored when seeking protection but machine-generated when denying infringement. Statutory definitions would reduce such uncertainty.

The third gap concerns the amount of human contribution required. Terms such as 'meaningful', 'substantial', 'creative' and 'identifiable' are useful but need operational guidance. Courts must know whether selecting one output from many is enough, whether editing twenty percent of a text is enough, whether detailed prompt iteration is enough, or whether only final manual editing counts. No statute can answer every factual situation, but legislation can provide guiding factors: nature of prompt, degree of control, number of iterations, human selection, editing, arrangement, transformation, final expressive contribution and documentation.

The fifth gap concerns training data. Traditional copyright law can treat unauthorized copying as infringement, but AI training involves large-scale copying for computational analysis. Existing exceptions may not clearly apply. Pakistan's law does not have an AI-specific text-and-data-mining exception, opt-out mechanism, transparency duty or licensing framework. This creates uncertainty for AI developers who need data and for creators who want control and remuneration. A modern copyright statute must address whether training requires permission, when exceptions apply, and what transparency is required.

4. Courts, Evidence and Cross-Border Enforcement

Courts will face a serious evidentiary challenge in proving human creativity. In traditional cases, drafts, sketches, manuscripts, recordings and testimony can show authorship. In AI cases, the creative process may occur through prompts, hidden model operations, iterative generations and digital edits. A claimant may assert human authorship but fail to preserve records. A defendant may argue that the claimant merely generated raw AI output. Courts will therefore need evidence such as prompt logs, version histories, editing files, metadata, source files, platform records, expert analysis and witness testimony. Documentation will become central to copyright litigation.

Another challenge is transparency. AI companies may resist disclosure of training data and model architecture on grounds of trade secrets, confidentiality and security. Claimants may need disclosure to prove infringement. Courts must balance these interests through confidentiality rings, protective orders, sampling methods and independent audits. Without disclosure, copyright claims may fail due to lack of evidence. With excessive disclosure, innovation and trade secrets may be harmed. Procedural law must therefore develop AI-sensitive discovery mechanisms.

Courts must also avoid two errors. The first is technological panic: assuming that every AI output infringes because it is generated from training data. The second is technological exceptionalism: assuming that AI is so new that ordinary copyright principles no longer apply. The better judicial method is principled adaptation. Courts should apply authorship, originality, infringement and remedies with attention to the AI process, while preserving the policy balance between protection and public access.

5. Why Legislative Reform Is Necessary

Legislative reform is necessary because judicial interpretation alone cannot provide comprehensive certainty. Courts can decide individual disputes, but they cannot design

licensing systems, transparency duties, dataset obligations or sector-wide default rules. Parliament is better placed to balance creators, AI companies, users, educators, researchers and public interests. Reform should not be rushed, but delay also has costs. AI use is already widespread, and legal uncertainty grows with every commercial deployment.

The first reform should be definitional. The Copyright Ordinance, 1962 should define 'AI system', 'AI-generated work', 'AI-assisted work', 'training data', 'prompt', 'model output' and 'meaningful human creative contribution'. Definitions should be technology-neutral so that they remain relevant as AI systems evolve. The law should avoid tying rules to specific tools such as chatbots or diffusion models. A broad definition can cover future systems while guidance and regulations provide details.

The second reform should clarify human contribution. Copyright protection should be granted only where a human made creative choices that are identifiable in the final work. The statute should list factors: creative conception, expressive prompting, selection among outputs, arrangement, editing, modification, integration into a larger work, and final control. It should also state that mere mechanical operation, generic prompting or acceptance of raw output is insufficient. This would help courts, creators and businesses understand the threshold.

The third reform should establish ownership rules. For AI-assisted works, ownership should follow existing rules: the human author is the first owner unless employment, commissioning, government work, assignment or contract provides otherwise. For purely AI-generated works, ordinary copyright should not subsist. If Parliament later creates a limited sui generis right, ownership should belong to the person who arranged and assumed responsibility for generation, subject to lawful training and disclosure. Platform terms should be recognized as contracts but not as substitutes for statutory authorship.

The fourth reform should address liability for infringement. The law should allocate responsibility among users, employers, developers and platforms based on control, knowledge and benefit. Users should be liable for unlawful prompts and publication of infringing outputs. Employers should be liable for commercial deployment by employees within scope. Developers and platforms should be liable where infringement results from unauthorized training, negligent safeguards, deliberate facilitation, or failure to act on notices. Safe harbours may be granted for compliant providers that maintain policies, filters, notice mechanisms and transparency records.

The fifth reform should regulate copyright-protected material used in AI training. Pakistan should create a licensing framework for commercial training, support collective licensing, allow limited exceptions for research and education, and require opt-out or rights-reservation mechanisms where feasible. It should also prohibit training on pirated or unlawfully accessed datasets. Transparency obligations should require commercial model providers to disclose categories of training data and licensing practices without forcing disclosure of trade secrets in every case.

The sixth reform should protect human creators. Moral rights should remain human. False attribution, removal of copyright management information, style-based misleading marketing and AI-generated impersonation should be addressed through copyright, unfair competition and related laws. Creators should have accessible complaint procedures and remedies. Collective management organizations should be modernized to handle AI licensing and remuneration.

The seventh reform should create institutional mechanisms. IPO Pakistan should issue AI copyright guidelines, maintain model clauses, support awareness campaigns, and coordinate with MoITT under the National Artificial Intelligence Policy 2025. Courts should receive technical training. Universities and research institutions should develop ethical AI data policies. Public procurement should require AI vendors to disclose copyright compliance. These measures would convert legal reform into practical governance.

6. Registration, Disclosure and Proof

Legal reform will be ineffective unless registration practice is clear and affordable. IPO Pakistan should issue administrative guidance before or alongside legislative amendment. The guidance should define three categories: AI-assisted works, mixed or hybrid works, and substantially AI-generated works. Applicants should not be required to disclose trivial uses such as spell-checking, routine noise reduction or automated formatting. Disclosure should be required where generative AI contributes material text, images, music, video, code or other expressive content for which protection is claimed.

The registration form should contain four questions. First, was generative AI used to create a material part of the work? Secondly, what human-authored expression is claimed? Thirdly, what generated material, if any, is excluded from the claim? Fourthly, what records exist to demonstrate the human creative process? The applicant should provide a concise statement

rather than voluminous technical data. Detailed prompts and source files may be retained by the applicant and produced only if required during examination or dispute resolution.

The Registrar should have power to request clarification, limit the scope of registration or require a disclaimer. A good-faith error should be correctable. Deliberate concealment of material AI generation should permit cancellation or restriction where the misrepresentation affected registration. These measures should be implemented proportionately so that individual creators and small businesses are not burdened by complex technical filings.

The claimant should bear the initial burden of identifying the human-authored contribution. Once a credible record of creative control is produced, ordinary evidentiary principles can apply. Relevant material may include concept notes, prompts, negative prompts, parameter settings, reference images, model and version information, generation histories, rejected outputs, editing files, layer histories, metadata, timestamps, source code, witness evidence and contractual records.

No single item should be conclusive. Prompt length is not a reliable proxy for creativity. Repeated generation may show persistence rather than authorship. Selection among alternatives may be creative in some contexts and routine in others. Courts should examine the relationship between the human decisions and the expressive features claimed. Expert evidence may assist where technical operation is disputed, but judges should retain responsibility for the legal standard of originality.

7. Training-Data Governance and Licensing

Output protection cannot be separated from the sustainability of human creative markets. Pakistan should develop a consultation process involving authors, publishers, journalists, musicians, filmmakers, visual artists, software developers, universities, libraries, AI companies and civil-society organisations. The objective should be a licensing and exception framework suited to local institutions.

Commercial model training should ordinarily depend on licence, statutory permission or another recognised legal basis where protected works are reproduced. Direct licensing may work for concentrated catalogues. Collective licensing can reduce transaction costs where many creators are involved. A voluntary extended scheme may be considered only if representative organisations, transparency and opt-out safeguards exist. Revenue distribution must be auditable and should not be captured entirely by large intermediaries.

Research and public-interest uses require different treatment. Universities, libraries and public research institutions may need a targeted exception for text and data mining where they have lawful access, maintain security and do not provide substitute access to the underlying works. Publicly funded local-language models could be supported through licensed datasets, open materials and creator partnerships. Such models may promote education, translation and public administration while respecting cultural rights.

Rights reservation should be technically meaningful. A creator's ability to opt out is ineffective if platforms ignore metadata or if standards differ across systems. Pakistan should participate in international work on machine-readable rights information and provenance. Major model providers operating in Pakistan should publish accessible information about categories of training sources, copyright policies and mechanisms for right holders to raise claims.

8. Contracts, Liability and Remedies

Many AI services allocate output rights through standard terms. These contracts can regulate relationships between providers and users, but they should not be mistaken for copyright law. A platform may promise that a user owns its rights in an output, yet the user cannot receive copyright that the statute does not recognise. Conversely, a platform may reserve broad licences over user content, including prompts and uploaded works. Such clauses should be transparent and subject to ordinary rules on unfair terms, consumer protection and competition.

Liability should follow the conduct and knowledge of the relevant actor. A user who deliberately requests or distributes a close imitation of a protected work may bear responsibility. A provider may bear responsibility where it materially contributes to infringement, ignores effective notices, markets a system for unlawful copying or fails to implement reasonable safeguards. A developer should not be strictly liable for every unpredictable output merely because the model is capable of generation.

Remedies should be proportionate. Courts may order injunctions, damages, accounts, attribution, removal of infringing material and preservation of evidence. Where an output contains both lawful human expression and infringing generated material, relief should target the offending elements where feasible. Overbroad injunctions could suppress legitimate research and expression.

9. The Human Creative Control Test

A workable threshold must convert the abstract idea of meaningful human contribution into evidence that registrars and courts can assess. The proposed test addresses creative choices, the role assigned to the system, the human shaping of final expression, identifiability of the protected contribution and respect for earlier works.

This study proposes a five-part legal test for copyright protection of AI-assisted works in Pakistan. A work should receive copyright protection only if: (1) a human made creative choices; (2) the AI was used as a tool, not as the sole creator; (3) the final work reflects human intellectual effort; (4) the human contribution is identifiable; and (5) the output is not substantially copied from existing copyrighted material. These elements should be applied together, not mechanically. The purpose is to separate protectable human expression from unprotectable machine output.

The first element requires human creative choices. The choices may occur before, during or after generation. Before generation, the human may design a detailed expressive concept, narrative, composition or structure. During generation, the human may guide the model through iterative prompts, constraints and selections. After generation, the human may edit, arrange, transform or integrate the output. The choices must be creative, not merely functional. A command such as 'make it better' is weak; a detailed artistic direction combined with selection and editing is stronger.

The second element asks whether AI was used as a tool rather than the sole creator. Tools can be sophisticated. A camera, synthesizer, editing software or code compiler may influence the final work, but the human remains author if human judgment controls expression. AI becomes the sole creator when the human provides only a minimal idea and the system determines the expressive features. The law should not penalize tool use, but it should not treat autonomous machine determination as human authorship.

The third element requires human intellectual effort in the final work. Effort alone is not enough if it is purely mechanical, but intellectual effort shows that the human shaped expression. Courts should look for creative decisions visible in language, composition, arrangement, structure, editing, selection, pacing, design, musical form or code architecture. The final work should bear the imprint of human judgment. This element connects originality with authorship.

The fourth element requires identifiable human contribution. If the human contribution cannot be separated or recognized, copyright should not extend to the whole output. Protection may be limited to human-authored parts, such as text, captions, arrangement, edited sequences or compiled selection. Claimants should provide evidence: drafts, prompt logs, rejected outputs, editing history, source files, metadata and testimony. Identification is necessary because copyright cannot protect vague assertions of creativity.

The fifth element excludes substantially copied output. Even if a human uses AI creatively, protection should not be granted to infringing material. If the output reproduces protected expression from a training work or prompt-supplied source, copyright cannot be claimed in the copied part. The claimant may own new additions but not unlawful copying. This element protects existing creators and discourages prompts designed to imitate protected works too closely.

The proposed test should be inserted into Pakistani law or issued as judicial/administrative guidance by IPO Pakistan until legislation is enacted. It is flexible enough for text, images, music, videos, designs and software. It is also consistent with comparative trends and Pakistan's human-centred copyright structure. Most importantly, it provides practical guidance for creators and businesses: document your human contribution, use AI as a tool, avoid infringing prompts, check platform terms and preserve evidence.

10. Implementation Roadmap

Reform should proceed in stages. In the first stage, IPO Pakistan can issue non-binding guidance, revise registration forms and establish an expert working group. In the second stage, Parliament can amend the Copyright Ordinance to define AI-assisted and AI-generated works, confirm human authorship, introduce disclosure and clarify the scope of protection. In the third stage, regulations can address evidence, registration, training transparency and sectoral licensing. In the fourth stage, the government can review the framework after three years using data on registrations, disputes, licensing and creative-sector effects.

Capacity building is essential. Judges, registrars, lawyers and copyright organisations require training on generative systems and digital evidence. Universities should develop interdisciplinary programmes linking law, computer science, creative arts and public policy. Public guidance should be available in clear language and, where feasible, in Urdu and regional languages.

The reform process should be consultative and transparent. Draft rules should be published for comment, and impact assessment should consider small creators, start-ups, public institutions and vulnerable cultural communities. Pakistan should also coordinate with WIPO and regional partners to improve international compatibility.

For Pakistani reform, the most practical first step is not a complete AI Act for copyright but targeted amendments to the Copyright Ordinance supported by IPO Pakistan guidelines. The guidelines can explain examples: a raw AI image from a generic prompt should not be registrable; a human-edited AI illustration may be registrable for the human modifications; an AI-generated textbook should require disclosure of human authorship and source verification; AI-generated software should require open-source licence checks; and commercial model training should require lawful datasets. Such examples would help courts and creators immediately, while Parliament considers wider reform.

The legal framework should also encourage documentation. In future disputes, the decisive evidence may be the prompt history, rejected generations, editing timeline, metadata and final comparison. Pakistani creators should be advised to preserve these records. Businesses should build AI-use policies requiring disclosure of tools, human review, source checking and third-party rights clearance. Universities should teach students that AI assistance does not remove plagiarism and copyright duties. These practical measures can reduce disputes even before litigation.

11. Conclusion

Pakistan should proceed through targeted copyright amendment and administrative guidance rather than waiting for a comprehensive AI statute. The central sequence is authorship first, ownership second: only after human-authored expression is identified should employment, commissioning, assignment or contractual rules allocate economic rights.

These provisions maintain the human foundation of copyright while avoiding technological exclusion. They also permit partial protection, which is essential for mixed works. The model does not create a new *sui generis* right because the evidence presently available does not establish that such a right is necessary for Pakistan. Parliament may reconsider the issue after reviewing economic evidence, but any special right should be short, narrow, registration-based and subject to robust exceptions.

The proposed framework should be reviewed after implementation. IPO Pakistan should publish anonymised statistics concerning AI-related registrations, refusals, corrections and

disputes. Courts should make reasoned decisions publicly available where confidentiality permits. This information will allow researchers to evaluate whether the Human Creative Control Test produces consistent outcomes.

The thesis ultimately proposes a development-sensitive framework for Pakistan: targeted statutory amendment, disclosure in registration, an evidence-based Human Creative Control Test, partial protection for hybrid works, public-domain treatment of autonomous output, fair training-data governance and institutional capacity building. This model balances innovation, human creativity, commercial certainty and public access. It preserves the normative identity of copyright while allowing the law to respond constructively to technological change.

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