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GHOST GUNS AND 3D PRINTING: IS INDIAN LAW EQUIPPED TO HANDLE DIY WEAPONS?

~ Hatif Khan

Introduction

The number of crimes employing "ghost guns," or unserialized, untraceable firearms that are frequently manufactured using 3D printers or assembly kits, has increased recently, according to US law enforcement.[1] These weapons represent serious risks to public safety and circumvent traditional regulatory processes. Although there haven't been many reports of similar events in India yet, the growing accessibility of reasonably priced 3D printing technology presents significant legal issues. The Arms Act of 1959 makes it illegal to manufacture or possess firearms without a license,[2] but it says nothing about digital blueprints or additive manufacturing. If this legislative vacuum is not addressed proactively, criminal elements may take advantage of it as India transitions to a digitally connected society.

What Indian law currently says?

The Arms Act, 1959, India's main gun control law, forbids the production, distribution, ownership, and use of weapons without the necessary permits.[3] It is unlawful to produce or possess any kind of weaponry or ammunition unless specifically permitted by Sections 3 and 5.[4] However, as the Act was written before the advent of digital technology, it does not take into

[1] United States Dep't of Justice, *Justice Department Announces New Rule to Modernize Firearm Definitions* (May 29, 2025), https://www.justice.gov/opa/pr/justice-department-announces-new-rule-modernize-firearm-definitions.
[2] Arms Act, No. 54 of 1959, §§ 3–5 (India).
[3] Id.
[4] Id. §§ 3, 5.

consideration weapons made using computer-aided design (CAD) files or 3D printing. Ghost guns are almost tough to track down since they don't have serial numbers as regular weapons do.

Additionally, there is no law that governs the sharing or ownership of digital weapon designs. Sharing files for 3D-printable weapons is not particularly addressed under the Information Technology Act of 2000, which penalizes the publishing of damaging information.[5] The import of sophisticated 3D printers that can produce metallic gun components is also unrestricted by customs laws. Because of this legislative gap, law enforcement is ill-prepared to identify or stop the emergence of ghost weapons in India.

Global perspective

Governments in several countries have acknowledged the regulatory issues raised by 3D printing and ghost weapons. Following a protracted court struggle, the Bureau of Alcohol, Tobacco, guns and Explosives (ATF) has released new regulations requiring background checks and serial numbers for some self-assembled guns in the United States.[6] Regardless of how they are made, 3D-printed weapons are illegal in the UK under the weapons Act, 1968, which forbids their manufacturing and ownership.[7] In a similar vein, Australia's Customs (Prohibited Imports) Regulations prohibit the possession of digital blueprints that can be used to manufacture guns.[8] Under its Firearms Directive, the European Union has demanded a unified strategy for regulating 3D-printed guns. A growing consensus that contemporary gun regulations need to change to take digital fabrication into consideration is shown in these comparative trends.[9] India, on the other hand, has not yet taken significant legislative or policy action, creating a widening regulatory blind area.

Risks for India

Even while ghost firearms are not currently a common issue in India, the nation is especially vulnerable due to a number of circumstances. First, the illicit distribution of firearms is already a

[5] Information Technology Act, No. 21 of 2000, § 67 (India).
[6] Definition of “Frame or Receiver” and Identification of Firearms; Corrections, 87 Fed. Reg. 51249 (May 29, 2025).

[7] Firearms Act 1968, c. 27, §§ 1–5 (UK).
[8] Customs (Prohibited Imports) Regulations 1956 (Cth) sch 6 (Austl.).
[9] Directive 91/477/EEC, of the European Parliament and of the Council of 18 June 1991 on control of the acquisition and possession of weapons, O.J. L 256, 13.9.1991, p. 51.

problem in India. India has the second-highest number of unregistered civilian guns in the world, with an estimated 61 million, according to a Small Arms Survey.[10] By avoiding conventional supply channels, criminal syndicates, insurgent organizations, or lone actors may be able to produce weapons covertly thanks to the availability of 3D printing technology.

Second, the illicit circulation of weapon CAD files via encrypted platforms like the dark web may be made easier by India's expanding unofficial digital economy. At the moment, law enforcement organizations lack the cyber-forensic capabilities necessary to properly identify and stop such activities.

Third, the entrance barrier for the production of weapons is lowering as 3D printers become more reasonably priced and have the ability to print metals or high-strength polymers.[11] Without control, ghost weapons may spread throughout rural and urban areas, making law enforcement more difficult and jeopardizing national security.

What can be done?

India needs to implement a multifaceted legal and policy response to the impending menace of ghost weapons. First, the production, distribution, and ownership of guns manufactured using additive manufacturing techniques, such as 3D printing, should be expressly prohibited by an amendment to the Arms Act of 1959.[12] It is necessary to define "digital weapons," "CAD files," and "unserialized arms" precisely.

Second, digital blueprints need to be subject to regulatory scrutiny. India might learn from Australia's example of outlawing both the ownership of 3D-printed firearms and the software that makes them possible.[13] Penalties for hosting or transferring such data might be added to the Information Technology Act of 2000.[14]

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[10] Aaron Karp, Estimating Global Civilian-Held Firearms Numbers, Small Arms Survey (June 2018), https://www.smallarmssurvey.org/resource/estimating-global-civilian-held-firearms-numbers.
[11] Id.
[12] Arms Act, No. 54 of 1959, India Code (1959).
[13] Customs (Prohibited Imports) Regulations 1956 (Cth) sch 6 (Austl.).
[14] Information Technology Act, No. 21 of 2000, § 67 (India).

Third, license requirements for high-capacity 3D printers and printing supplies like metallic filaments or high-strength polymers have to be included in domestic commerce or customs regulations. Enforcement agencies' forensic and cybersecurity capabilities also need to be improved in order to keep an eye on illicit transmissions through encrypted platforms or the dark web.

India runs the risk of turning into a breeding ground for illegal, undetectable, and untraceable weapons if swift and accurate legislative reforms are not implemented.

Conclusion

An emerging yet serious threat to national security and public safety is the rise of "ghost guns," which are undetectable, unserialized, and digitally created firearms. While countries all over the world have started to modify their legal systems to address this issue, India's existing legal system is still antiquated and inadequate. To stop digital weapons from becoming an uncontrolled threat, legislative changes are desperately needed, together with trade regulation and cyber monitoring. India's legal system has to keep up with technology advancements in order to protect society from the shadowy side of innovation.