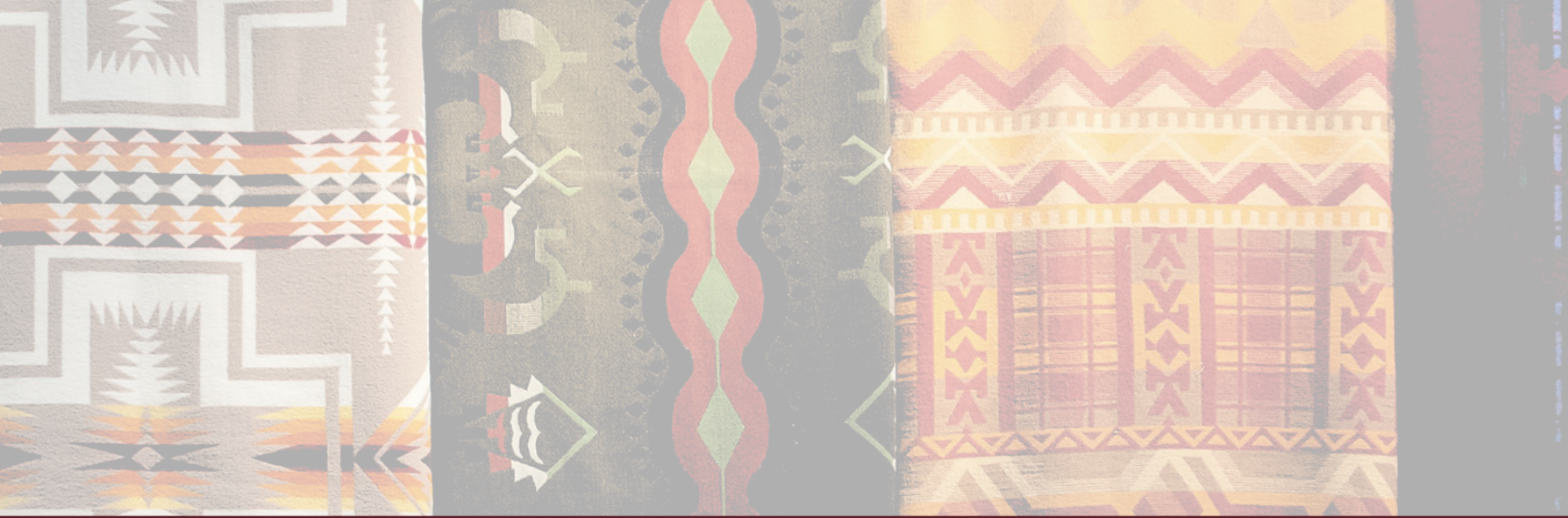




GEOGRAPHICAL INDICATIONS, DESIGN RIGHTS AND TRADE SECRETS

*Understanding the Law Governing Regional Identity, Industrial
Creativity and Business Confidentiality*



VINTAGE LEGAL PUBLICATION

Geographical Indications, Design Rights, and Trade Secrets

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**Part I –
Geographical Indications and Traditional
Knowledge**

CHAPTER 1: GEOGRAPHICAL INDICATIONS AS INSTRUMENTS OF RURAL DEVELOPMENT AND ECONOMIC GROWTH

BY SNEHA VERMA

INTRODUCTION

In the modern world, customers are increasingly drawn to products that are unique and connected to a particular place. Several products are well known due to the history of manufacturing methods attached to them and also because they belong to a specific well known region. So, such products are protected by Geographical Indications (GIs). It refers to the protection that is granted to the goods that originate from a specific area and have distinctive qualities, characteristics, or a reputation because of that location. Alphonso mangoes, Banarasi sarees, Kanchipuram silk, and Darjeeling tea are a few examples¹. GIs make sure that only legitimate manufacturers are able to use the Geographical Indication tag, protecting these goods from imitation². Geographical indications are, for the purposes of this Agreement, indications which identify a good as originating in the territory of a member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin³.

Beyond only providing legal protection, geographic cues are crucial. They greatly contribute to rural development and economic growth by increasing the value of local goods, generating employment, and increasing the income of farmers, craftsmen, and craftspeople. GIs also aid in the preservation of traditional knowledge, cultural heritage, and long-standing production

¹ *The Geographical Indications of Goods (Registration and Protection) Act*, 1999, No. 48 of 1999, §§ 2(1)(e), 11 (India).

² *The Geographical Indications of Goods (Registration and Protection) Act*, 1999, §§ 2(1)(e), 21–22 (India).

³ *Agreement on Trade-Related Aspects of Intellectual Property Rights* (TRIPS), art. 22.1, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299.

techniques that have been passed down through the ages. GIs improve prices for rural communities and open up new markets by giving local goods a unique identity. They therefore support regional development, sustainable livelihoods, and the reduction of poverty.

This study aims to explore the concept, importance, and use of geographical indications as instruments for rural development and economic growth. It seeks to understand how GI conservation benefits local communities, protects traditional knowledge, promotes economic activity, and strengthens rural economies. This article discusses the legal structure governing GIs in India, the challenges associated with their implementation, and recommended actions to maximize their potential for growth. The study highlights the importance of Geographic Indications as a tool for achieving fair and sustainable development.⁴

CONCEPT AND LEGAL FRAMEWORK OF GEOGRAPHICAL INDICATIONS

A geographical indicator is a form of intellectual property that identifies a product as originating from a certain region when its quality, reputation, or other characteristics are substantially connected to that region. GI is based on the idea that certain things are unique and valuable because of unique natural and human factors associated with a certain region. Soil, climate, traditional agricultural techniques, local expertise, and cultural heritage are some examples of these elements. Darjeeling tea, Banarasi sarees, Kanchipuram silk, and Alphonso mangoes are well-known Indian products with geographical identifiers. The first Geographical Indications to be registered in India under the Tea Board's name were the DARJEELING word and logo under the Geographical Indications of Goods (Registration and Protection) Act, 1999. GIs are collective rights that can be used by any qualifying producers within the specified geographic region who adhere to the defined regulations, as opposed to trademarks, which are owned by an individual or business. An export-market plan for India's premium mango and the Konkan Alphonso GI tag indeed covers the specific intersection of GI protection, export strategy, and economic impact for this product.⁵

⁴ World Intellectual Property Organization, *Geographical Indications: An Introduction* 14–25 (WIPO Publication No. 952E, 2nd ed. 2021).

⁵ S. V. Sivakumar, "Geographical Indications and Rural Development in India," 53 *Journal of the Indian Law Institute* 432 (2011).

Geographical indications comprise a few key features. The product and its place of origin must first be clearly connected. Secondly, the product needs to possess specific attributes, traits, or a reputation exclusive to that area. Third, only producers that are situated within the specified geographic area are permitted to use a GI. Fourth, GIs shield customers from deceptive or fake items and assist them in identifying genuine products. Finally, but just as importantly, GIs sustain rural areas economically while helping to preserve regional production methods, cultural resources, and traditional knowledge.⁶

Such key features are also well reflected in the World Trade Organization enforces the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which governs the international protection of geographical indications. According to Article 22 of the TRIPS Agreement, geographical indications are those that designate goods as being from a specific area, region, or place where a specific characteristic, reputation, or quality of the product is primarily related to its geographical origin⁷. The Agreement requires member nations to have laws in place to guard against GI abuse and shield consumers from dishonest business activities.

Furthermore, the World Intellectual Property Organization is essential in fostering global collaboration and creating legal structures that safeguard intellectual property rights, including geographical indications. WIPO helps nations increase GI protection and promote the economic worth of locally specific products through a number of treaties, directives, and awareness initiatives.

The legal framework for safeguarding geographical indications in India is provided by the Geographical Indications of Goods (Registration and Protection) Act, 1999, which became effective in 2003. The Act was intended to fulfill India's duties under the TRIPS Agreement and to preserve commodities with unique regional characteristics. The Act establishes a mechanism for the registration and protection of GIs and provides legal remedies against infringement and unlawful use. Hence, Chennai's Geographical Indications Registry was also established under the said Act. A registered GI is granted protection under the Act for ten years, with the option to renew it on a regular basis. The law seeks to prohibit unfair competition, protect producers'

⁶ Dwijen Rangnekar, *The Socio-Economics of Geographical Indications: A Review of Empirical Evidence from Europe*, UNCTAD-ICTSD Issue Paper No. 8 (2004).

⁷ World Intellectual Property Organization, *Geographical Indications: An Introduction*, WIPO Publication No. 952(E), 2nd ed. (2021).

rights, encourage exports, and advance rural and regional development⁸. The Act has become a crucial instrument for preserving India's cultural legacy and fostering the economic development of regional communities by granting legal recognition to goods associated with certain areas.

GEOGRAPHICAL INDICATIONS AND RURAL DEVELOPMENT

The Act establishes a system for the registration and protection of GIs and provides legal remedies against infringement and illicit use. In order to register GI products, it also created Chennai's Geographical Indications Registry. Under the Act, a registered GI is protected for ten years, with the possibility to extend it on a regular basis. The law aims to prevent unfair competition, safeguard the rights of producers, promote exports, and promote regional and rural development. By giving products connected to specific regions legal protection, the Act has emerged as a vital tool for maintaining India's cultural past and promoting the economic growth of local communities.

One of the GIs' greatest accomplishments is income generation. GI-protected products often have a higher market value because consumers associate them with uniqueness, quality, and uniqueness. For instance, Darjeeling Tea, Banarasi Sarees, Kanchipuram Silk etc. are renowned for their heritage and excellence. Increased revenue not only helps producers' financial circumstances but also fosters regional economic expansion.⁹

GIs also have a major impact on reducing poverty. A large percentage of GI products are produced by small-scale farmers, craftspeople, and artisans from economically disadvantaged groups; the extra money they receive from GI recognition improves their standard of living and gives them access to better housing, healthcare, and educational opportunities. Because local farmers gain from GI protection, it encourages equitable growth and lessens economic inequality in rural areas.

The ability of GIs to improve rural livelihoods is another significant benefit. Because of industrialization and shifting consumer preferences, traditional jobs frequently struggle to survive. By boosting demand for genuine items and guaranteeing that producers are fairly

⁸ *Scotch Whisky Association v. Golden Bottling Ltd.*, (2006) 32 PTC 656 (Del).

⁹ *Geographical Indications Registry v. Amar Singh Chawal Wala*, 2014 SCC OnLine Mad 1726.

compensated for their labour, GI protection aids in the preservation of these professions. This encourages communities to continue employing traditional farming methods and crafts that have been passed down through the centuries¹⁰. Thus, GIs not only provide economic benefits but also aid in the preservation of local culture and traditional knowledge.

Geographical signals also help to reduce migration from rural to urban areas. Migration from villages to cities is frequently caused by poverty, unemployment, and the lack of economic opportunities in rural areas. GI protection boosts the marketability of regional products and generates employment, providing individuals in local areas with steady sources of income. This lowers the need for migration in rural regions and promotes social stability. Additionally, by ensuring that economic advancement is not restricted to metropolitan centres alone, it promotes balanced regional development.

Geographical markers therefore function as more than just intellectual property rights. Because they generate revenue, lower poverty, sustain livelihoods, protect traditional jobs, and provide doors for long-term economic growth, they are tools for rural transformation. Their contribution serves as an example of how regional goods' legal protection can immediately raise living standards and encourage fair development in rural areas.

ROLE OF GIs IN EMPLOYMENT GENERATION AND LOCAL ENTREPRENEURSHIP

Geographical Indications (GIs) are essential for promoting employment and entrepreneurship, particularly in rural areas where traditional jobs are the backbone of local economies. GIs generate economic opportunities for farmers, artists, weavers, and craftsmen by giving items connected with a particular geographic area legal status and market value. They support the expansion of regional businesses and assist in converting traditional knowledge and skills into long-term revenue streams¹¹. Therefore, GIs play a major role in industrial development, rural economic empowerment, and the creation of jobs.

¹⁰ The Geographical Indications of Goods (Registration and Protection) Act, 1999, §§ 2(1)(e), 11–17.

¹¹ Kal Raustiala & Stephen R. Munzer, "The Global Struggle over Geographic Indications", *18 European Journal of International Law* 337 (2007).

The establishment of job possibilities is one of GIs' most important contributions. A lot of GI goods are made using labour-intensive methods that call for certain knowledge and expertise. Handloom textiles, handicrafts, and agricultural products rely primarily on human labor, in contrast to factory-made commodities. Jobs are created at several phases of production, including cultivation, processing, packing, shipping, marketing, and retailing, as a result of the growing demand for GI products¹². For example, the production of Banarasi sarees supports hundreds of weavers and craftspeople in Uttar Pradesh, and Darjeeling Tea employs tea growers, plantation workers, and traders. GI protection thus stimulates regional economies and generates direct and indirect employment opportunities.

GIs also foster the expansion of small businesses, which are crucial to rural development. Most GI goods are produced by small farmers, artisans, cottage industries, and family-run enterprises. These producers frequently struggle to compete with machine-made goods and large-scale manufacturers. By stressing the authenticity, quality, and cultural significance of their products, GI recognition helps companies stand out in the marketplace. Small-scale businesses flourish and expand as consumer demand for authentic local goods rises. In addition to increasing producers' earnings, this promotes regional industrial growth and economic diversification.

Moreover, GIs promote rural entrepreneurship. A product's GI registration frequently opens up new commercial prospects in the areas of branding, packaging, marketing, travel, and exports. In order to market and sell GI products to larger markets, young entrepreneurs are increasingly utilizing digital platforms, social media, and e-commerce websites. GI-based entrepreneurship promotes innovation and modernization in rural industries while assisting in the preservation of traditional skills. Rural business owners can effectively compete in both domestic and foreign markets by fusing traditional knowledge with modern business tactics.

Geographical indications are therefore employed for purposes much beyond the protection of intellectual property. They are helpful tools for employment generation, industrial expansion, and entrepreneurial development. By producing jobs, aiding small-scale enterprises, fostering producer associations, and encouraging entrepreneurship, GIs greatly contribute to rural prosperity and inclusive economic growth. Their achievements highlight how local resources,

¹² K.C. Kailasam & Ramu Vedaraman, *Law of Trade Marks and Geographical Indications* (2nd ed., LexisNexis Butterworths Wadhwa, 2010).

customs, and cultural history can be converted into economic assets that benefit entire communities.

GEOGRAPHICAL INDICATIONS AS DRIVERS OF ECONOMIC GROWTH

Geographical indications (GIs) have become important tools of economic growth by enhancing the value of local commodities and increasing their competitiveness in both domestic and international markets. GI products have a significant edge over generic things in a global economy where purchasers are looking for authenticity, quality, and cultural difference. GIs generate a particular identity that sets them different from other commodities on the market by identifying things with a certain geographic area. By increasing regional economies, facilitating trade, and stimulating investment, this distinction not only helps producers through better sales and profitability but also supports broader economic development.

Market expansion is one of the most important ways that GIs support economic growth. GI registration increases a product's visibility and legitimacy, increasing its customer appeal. Because customers identify products with a known geographical identity with authenticity and quality, they frequently have easier access to both domestic and foreign markets. Producers are able to grow their clientele, penetrate new markets, and improve their standing in the market thanks to this increasing demand. Production levels rise in response to expanding market prospects, resulting in increased revenue and increased regional economic activity.

Geographical Indication has allowed the customers to place a reliable trust on the products. Customers are willing to pay fair amounts for genuine goods with a solid local reputation in the contemporary global economy. This has indeed flourished the economy. Indian GI goods including Alphonso Mangoes, Banarasi Sarees, Pashmina Shawls, Basmati Rice, and Darjeeling Tea have become well-known worldwide and are in high demand. By preventing imitation and unauthorized use, GI protection preserves the character of these goods and guarantees that the profits go to the real manufacturers. Increased exports boost India's trade balance, produce

foreign exchange gains, and support the country's economic expansion¹³. The prosperous experiences of nations like France with Champagne and Italy with Parma Ham show how GI protection can turn regional goods into internationally valued economic assets.

GIs also significantly contribute to regional economic development. GI products have a favourable impact on the local economy in addition to the individual producers. Jobs in associated industries including packaging, transportation, marketing, tourism, and retail are created by increased production and sales¹⁴. The popularity of GI products frequently draws both public and private investment in technology, infrastructure, and skill development, which boosts economic expansion even more¹⁵. Through its GI products, areas like Darjeeling, Varanasi, and Kanchipuram have become well-known both domestically and internationally, which encourages travel and new business prospects. GIs therefore serve as catalysts for both economic diversification and balanced regional development. The yearly turnover of the town exceeds Rs. 200 crores, with exports of approximately Rs. 3 crores... The Central Geographical Indication Registry approved the application for Geographical Indication Registration of the Kanchipuram silk saree by the Tamil Nadu government¹⁶.

Geographical indications are therefore far more than just legal instruments for intellectual property protection. By opening up new markets, encouraging exports, adding value through premium pricing, and fostering regional development, they act as potent engines of economic progress. In addition to enhancing producer livelihoods and bolstering the economy as a whole, GIs promote sustainable and inclusive economic development by turning local resources, traditional knowledge, and cultural heritage into viable economic assets.

PRESERVATION OF TRADITIONAL KNOWLEDGE AND CULTURAL HERITAGE

¹³ Pradyot Ranjan Jena, Dil Bahadur Rahut & Ulrike Grote, "Geographical Indication Protection and Rural Livelihoods: Insights from India and Thailand" 29 Asian-Pacific Economic Literature 174 (2015).

¹⁴ Justin Hughes, "Champagne, Feta, and Bourbon: The Spirited Debate about Geographical Indications" 58 Hastings Law Journal 299 (2006).

¹⁵ Valentina Raimondi, Daniele Curzi, Filippo Arfini & Chiara Falco, "Dynamic and Spatial Approaches to Assess the Impact of Geographical Indications on Rural Areas" 108 Journal of Rural Studies 103279 (2024).

¹⁶ Justin Hughes, "Champagne, Feta, and Bourbon: The Spirited Debate about Geographical Indications" 58 Hastings Law Journal 299 (2006).

Geographic Indications (GIs) play a major role in preserving traditional knowledge and cultural assets. Many GI products are made using unique skills, techniques, and processes that have been passed down through the generations. These products have economic value, but they also represent the identity, history, and culture of the people who produce them. Banarasi sarees, Kanchipuram silk, Madhubani paintings, and pashmina shawls are a few examples of the rich traditions and artistic talent of many regions of India.

GI protection helps to maintain these historic skills by providing legal recognition and prohibiting unauthorized use of the product's brand and reputation. Younger generations are therefore more likely to acquire and maintain these abilities rather than give them up for other careers.¹⁷ Additionally, GIs contribute to the preservation of a region's cultural identity by endorsing goods that are strongly associated with regional traditions, customs, and lifestyles. As a result, geographical indications are a useful instrument for maintaining cultural heritage and traditional knowledge while also promoting community welfare and economic growth.

CHALLENGES IN UTILIZING GEOGRAPHICAL INDICATIONS FOR RURAL AND ECONOMIC GROWTH

Geographical Indications (GIs) have the ability to promote rural development and economic progress, but a variety of obstacles prevent their effective implementation. One of the biggest challenges is that farmers, artisans, and producers are unaware of the benefits of GI registration and protection¹⁸. Many manufacturers are not aware of how GI status can enhance market access and boost the value of their goods. Because of this, GI protection's potential is frequently misused.

The widespread abuse and copying of GI products are another serious problem. In addition to deceiving customers, counterfeit goods marketed under the names of well-known GI products damage the reputations and earnings of real manufacturers. Even though there is legal protection,

¹⁷ K.C. Kailasam & Ramu Vedaraman, *Law of Trade Marks and Geographical Indications* (2nd ed., LexisNexis Butterworths Wadhwa, 2010).

¹⁸ Pradyot Ranjan Jena, Dil Bahadur Rahut & Ulrike Grote, "*Geographical Indication Protection and Rural Livelihoods: Insights from India and Thailand*" 29 *Asian-Pacific Economic Literature* 174 (2015).

it can be costly and time-consuming to enforce GI rights and take action against infringement, particularly for small producer groups.

Marketing and commercialization remain significant barriers. A large number of GI products are produced in isolated locations with little access to internet platforms, packaging facilities, branding tactics, and advanced marketing channels¹⁹. Because of this, many GI products are not given the recognition they deserve and are unable to enter larger markets. Furthermore, it is frequently tough to maintain similar quality standards across all producers, which can have an impact on consumer confidence and the product's overall reputation. The lack of international protection for Indian GI items is another problem. The substantial financial resources and legal expertise needed to gain recognition and legal protection in other countries are beyond the means of many producer organizations. As foreign competition increases, the lack of strong international protection may reduce the commercial potential of Indian GI products.

Therefore, despite their many benefits, GIs face challenges with awareness, enforcement, marketing, quality control, and worldwide recognition. Stronger regulations, better producer support, and effective marketing strategies are necessary to overcome these issues and guarantee that Geographical Indications fully contribute to rural development and economic advancement.

WAY FORWARD

To fully realize the potential of Geographic Indications (GIs) as instruments for rural development and economic success, a more comprehensive and coordinated approach is required. Despite India's impressive progress in GI product registration, more needs to be done to ensure that GI protection benefits locals both socially and economically.

The first step is to spread awareness of the advantages of GI registration and protection among farmers, artisans, weavers, and producers. Government agencies, educational institutions, and producer organizations should conduct awareness campaigns and training programs to assist local residents in understanding the market value of GI items and the legal rights associated with them.

¹⁹ Kal Raustiala & Stephen R. Munzer, "*The Global Struggle over Geographic Indications*" 18 European Journal of International Law 337 (2007).

Second, in order to stop GI product abuse and counterfeiting, more robust enforcement measures should be created. Tighter penalties for infringement, efficient monitoring systems, and simpler access to legal remedies can all help safeguard the reputation of authentic items and guarantee that creators receive just compensation.

Third, marketing, branding, and promotion ought to receive more attention. Many individuals are unaware of GI products, despite their enormous commercial potential. Digital platforms, e-commerce websites, social media marketing, and foreign trade shows can all be used to expand market reach and consumer awareness. GI products can become even more competitive with better packaging and branding.

Building up producer organizations and cooperatives is another crucial step. Collective organizations can lower manufacturing costs, increase bargaining power, preserve quality standards, and make it easier to access government assistance programs. Robust producer associations also guarantee equitable distribution of GI protection's advantages to all parties involved.

The government must also actively promote the international registration and protection of Indian GI items. Acknowledgment in global marketplaces will help prevent illicit use and provide new export opportunities. In order to effectively compete in global markets, small manufacturers should also be given financial and technical assistance.

Finally, more all-encompassing plans for rural development, tourism initiatives, and skill-building exercises must be integrated with GI preservation. More job possibilities and sustainable regional development can be achieved by increasing GI-based tourism, supporting traditional crafts, and encouraging young involvement in local industry.

CONCLUSION

In a world where mass production and globalization can overshadow local identity, Geographical Indications (GIs) provide a unique way to link economic progress with cultural preservation. They recognize that a product's value is determined not only by its physical characteristics but also by the people, traditions, skills, and geographical conditions that affect it. By protecting

products that are well-established in a particular location, GIs ensure that local communities are recognized and profit financially from their skill and craftsmanship.

This study demonstrates that GIs are much more than merely a kind of intellectual property protection. They are powerful instruments for rural development because they create jobs, increase incomes, support small businesses, encourage entrepreneurship, and open up new markets. They also help to preserve traditional knowledge, protect cultural heritage, and strengthen local identities that could otherwise disappear as a result of the pressures of urbanization and industrialization.

The experience of a number of GI goods in India shows that when local resources, traditional skills, and community involvement are combined with legislative protection, they can provide significant economic value. GI goods are currently unable to realize their full potential due to a number of issues, including limited awareness, ineffective marketing, loose regulations, and lack of global recognition. To tackle these challenges, businesses, government agencies, producer associations, and consumers must collaborate.

What ultimately makes Geographical Indications so potent is their ability to convert local heritage into sustainable commercial opportunities without sacrificing cultural authenticity. Instead of continuously having to give up tradition in order to improve, they demonstrate how tradition itself can become a source of creativity, progress, and riches. Instead of continuously having to give up tradition in order to improve, they demonstrate how tradition itself can become a source of creativity, progress, and riches. For India, a country rich in cultural diversity and traditional handicrafts, GIs offer a path toward inclusive development where economic progress coexists with the preservation of identity, legacy, and communal values. Therefore, rather than only being a legal right, geographical indications represent a vision for sustainable and people-centered development in the twenty-first century.

CHAPTER 2: ENFORCEMENT CHALLENGES AND MISAPPROPRIATION OF GEOGRAPHICAL INDICATIONS

BY ANJIKA RAJ

INTRODUCTION

The Kohlapuri Chappal of Maharashtra sells at a humble price of ₹100 to ₹200, but when a global luxury giant like Prada marketed the design as “accessible fashion”, there were no acknowledgements of the artisans or any cultural credit for the communities that have crafted this sandal for centuries. Despite the Chappal having a Geographical Indication tag under the Geographical Indications of Goods (Registration and Protection) Act, 1999, there was no proper enforcement which could safeguard its authenticity.

This chapter traces the gap between what the tag says and what it does. India has over 600 registered GIs, and the Act that created them was written to add to the economic prosperity of producers. Twenty-five years later, the prosperity has not followed. This chapter explores why and what it would take to actually fix it.

THE LEGAL FRAMEWORK OF GI PROTECTION IN INDIA

A. Historical and Legislative Context

Before 1999, India had no law specifically protecting geographical indications. If someone misused a product name, the only option was a passing-off suit, which meant proving misrepresentation and damage in court. For a Kohlapuri cobbler or Darjeeling tea garden worker, or in fact any small artisan, that was not a feasible option.

The GI Act, 1999 primarily came into effect when India became a member of the WTO. Articles 22 to 24 of TRIPS required member states to give rights holders a legal tool against misleading

use. To fulfil these requirements, India enacted the Act, and it came into force on 15 September 2003.

The Act drew from the European model of *sui generis* GI protection, where GIs are recognised as a distinct category of intellectual property independent of trademark law. But it did not replicate the producer-benefit mechanisms of the EU or its hierarchical designation system. What India enacted was a registration-and-enforcement framework, a system that designated which products were protected, but said very little about how the people who make those products would benefit.²⁰

B. The Registration Framework: Who Can Apply and What They Receive

The 1999 Act established a registration process through the Geographical Indications (GI) Registry based in Chennai. Section 8 permits Associations, Government Bodies or Statutory Authorities to apply for GI registration; however, the section limits this option from being made available to Individual Producers/Artisans/Farmers.²¹ Therefore, the rights created under the Act will remain with Institutions rather than those who produce the product.²²

Internationally, this generic usage provision is important because RiceTec Inc. was able to argue before the U.S. Patent & Trademark Office ("USPTO") that "Basmati", a type of long-grain aromatic rice originating in India, had entered generic status for all varieties of long-grain aromatic rice. Although India protested this position, the experience demonstrated how vulnerable even well-established GI names were to challenge in jurisdictions outside of India in which the provisions of the 1999 Act do not apply.

Once an Application is processed under Section 11 of the Act, it is advertised, and any interested party can make oppositions to the Registration within a period of three (3) months. It is common for window producer communities to fail to learn about these proceedings and therefore fail to participate.²³ Once a Registration is granted, Section 24 provides for the Registered Body to seek Infringement Relief and to also utilise the GI.

²⁰ The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), Statement of Objects and Reasons.

²¹ The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), s. 8.

²² The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), s. 9.

²³ The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), s. 11.

Section 17 of the Act contains an authorised user mechanism designed to connect the Registered GI to the actual producers so they too can benefit from the protections afforded by the GI. For example, if the Tea Board is listed as holding the Darjeeling GI, tea garden worker(s) should be eligible to register as authorised users so they too can receive benefits from having their work protected.²⁴

C. The Extent of Protection: What Registration Actually Offers

Section 22 defines infringement as any unauthorized use that suggests false geographical origin, misleads consumers, or amounts to unfair competition.²⁵ Section 67 gives courts power to grant injunctions, damages, or an account of profits. What the provision doesn't do is worth understanding.

The scope of Section 22 has three limitations.

It covers goods, not services. The Calcutta High Court confirmed this in *Tea Board of India v. ITC Ltd.*; a hotel lounge called “Darjeeling” does not infringe the GI because a lounge is a service, and Section 22 was never written to reach services.²⁶

The Act limits its application to the Indian border; if a foreign brand takes the design of a Kolhapuri chappal and sells it internationally without using the name “Kohlapuri”, it faces no liability under the Act. Not because it is permissible, but because Indian GI law has no reach outside India.

And it protects the name, not the design. The Designs Act, 2000 offers separate design protection, but that must be independently registered.²⁷ GI registration confers no automatic design protection. A product name can be protected while the visual identity that actually drives its commercial value remains completely open to appropriation.

These three gaps together reveal that the Act was actually built for stopping name misuse in Indian markets. However, that was a reasonable scope in 2003, but it is not so adequate now.

²⁴ The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), s. 17.

²⁵ The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), s. 22.

²⁶ *Tea Board of India v. ITC Ltd.*, 2019 SCC OnLine Cal 781.

²⁷ The Designs Act, 2000 (Act 16 of 2000), s. 5.

THE ENFORCEMENT GAP: THREE CASE STUDIES

The limitations of the GI Act identified do not remain theoretical, but have pressing consequences. Three case studies, Darjeeling tea, Basmati rice, and the Kolhapuri chappal trace those limitations across decades of real disputes, in domestic courts, foreign patent offices, and globalised luxury markets. Each tells a different part of the same story that the Act doesn't deliver on what it promised.

A. Darjeeling Tea

In October 2004, Darjeeling became the first product to receive GI status under the 1999 Act, with the Tea Board of India as registered proprietor.²⁸ The Tea Board had fought misappropriation since the 1980s, first via certification trademark, then copyright. By the time the GI Act took effect, the problem was already severe: by the 1980s, an estimated 40,000 metric tonnes of tea was being sold as Darjeeling annually, four times the total output of all 87 Darjeeling estates combined.²⁹

Registration did not stop the misappropriation of the product. After 2004, the Tea Board continued fighting the Darjeeling name across Japan, France, Russia, Norway, the US, Germany, Israel, and Sri Lanka. In France, a company registered “Darjeeling” as a trademark for clothing, but the examining authority held that the difference in goods was sufficient to allow it. The GI Act of India offered no remedy due to its limited scope.³⁰

The case in Japan was even worse; the Darjeeling name and logo had already been registered as trademarks by local companies. The Tea Board won cancellation before the Japan Patent Office in 2002, but it was only after years of litigation, which would not be financially possible for several small producers.

²⁸ Geographical Indications Registry, Application No. 1 (Darjeeling Tea), available at: <https://ipindia.gov.in/gi.htm> (last visited on June 24, 2026).

²⁹ Tarit Kumar Datta, 'Darjeeling Tea: Linking Quality, Origin and Tradition' (FAO/SINER-GI, 2007) 3.

³⁰ World Trade Organisation, 'Protecting the Geographical Indication for Darjeeling Tea' (WTO Case Study, 2004), available at: https://www.wto.org/english/res_e/booksp_e/casestudies_e/case16_e.htm (last visited on June 24, 2026).

Domestic enforcement was no better. In *Tea Board of India v. ITC Ltd.*, the Calcutta High Court declined to restrain a luxury hotel lounge named "Darjeeling," holding that the Act protects goods, not services.³¹ The reasoning was sound, but the effect confirmed that a registered GI cannot stop commercial exploitation of the name in contexts the Act never expected.³²

B. BASMATI RICE

On 2 September 1997, the U.S. Patent Office (USPTO) issued a patent entitled "Basmati Rice Lines and Grains" (Patent No. 5,663,484) to RiceTec Inc., a Texas corporation, which claimed ownership of Basmati-type rice varieties grown in the Americas. The patent contained twenty claims on twenty different types of rice lines.³³

There were two problems associated with this patent. First, it restricted competition. Second, the United States was granting intellectual property rights based upon traits which had been developed and protected by many communities in the sub-Himalayan region for centuries. The Government of India objected to the issuance of the patent in 2000 via a petition filed through its Agricultural and Processed Food Products Export Development Authority (APEDA), supported by nearly 50,000 pages of documentation showing the indigenous origins of Basmati.³⁴

After a reexamination of the patent, fifteen of the twenty claims were cancelled, including those covering the most commercially valuable type of rice, and the term "Basmati" was dropped from the title of the remaining five claims. The Government of India considered this outcome to be a major victory. However, the battle did not end there. Following the partial victory at the USPTO, India was compelled to pursue 40 additional legal battles across 25 countries to protect the Basmati name in foreign markets.³⁵ The main reason behind these losses is that India does not have access to stronger protections for GIs under Article 23 of TRIPS since Basmati is an agricultural product, and not a wine or spirit.

³¹ *Tea Board of India v. ITC Ltd.*, 2019 SCC OnLine Cal 781.

³² Tarit Kumar Datta, 'Darjeeling Tea: Linking Quality, Origin and Tradition' (FAO/SINER-GI, 2007) 12.

³³ RiceTec Inc., US Patent No. 5,663,484, 'Basmati Rice Lines and Grains' (granted September 2, 1997).

³⁴ Lexology, 'How Did India Win in the Legal Battle Against Biopiracy Regarding Basmati Hybrid Rice Variety Patented by the USPTO' (July 17, 2021), available at: <https://www.lexology.com/library/detail.aspx?g=3b46692a-8b13-416a-b35d-f766f69a52e2> (last visited on June 24, 2026).

³⁵ Shivam Pandey, "Case Study of Rice Tech (India-US Dispute) and Transformation of India from Trademark Act to Sui Generis System" 4 *International Journal of Law Management and Humanities* 1 (2021).

Under Article 22, TRIPS requires only proof that a GI causes consumers to believe that the GI originates from another country, which can be difficult to establish and expensive to pursue in foreign jurisdictions. Article 23 protects wines and spirits automatically without requiring evidence that consumer confusion will occur. Examples include Champagne, Burgundy, and Scotch Whisky. Darjeeling Tea, Basmati Rice, and Kolhapuri Chappals are subject to the weaker protections of Article 22; wine and spirits manufacturers successfully negotiated exclusive provisions for themselves when drafting TRIPS.

C. Kolhapuri Chappal

The Kolhapuri chappals are traditional leather sandals made in Kolhapur and Solapur for centuries were registered under Application Nos.222 and 223, with the District Industries Centres as proprietors and individual artisans as potential authorised users.³⁶

In the case of the Prada Spring/Summer 2026 collection (2025–2026), a series of shoes were designed that incorporated all the characteristics of the traditional chappal – the toe ring, the interwoven straps made of leather, and the geometric shape of the flat sole. These shoes were marketed around the world as "accessible luxury" and were available for purchase at international prices; however, there was no reference to the geographical origins of this shoe design, nor was there any recognition of or compensation paid to the artisans who developed the designs.

No legal action was possible. The Act protects the name “Kolhapuri”, but Prada never used the name, only the design, and design appropriation falls entirely outside Section 22. Even if it hadn’t, Section 22 operates within India; the appropriation happened in Italy and was sold across Europe and North America. And separately registering the design under the Designs Act, 2000 would have required the artisan communities to have anticipated, filed, and maintained design registrations for a traditional form they had made freely for generations, which they had not done, and realistically could not have been expected to.

³⁶ Geographical Indications Registry, Application Nos. 222 and 223 (Kolhapuri Chappal), available at: <https://ipindia.gov.in/gi.htm> (last visited on June 24, 2026).

The separation of Design Law and GI Law. If Prada wanted to protect the design of its shoes in India, it would have to file an independent application for protection for each design feature of its shoes under the Designs Act, 2000. This is a distinct filing process, which has separate costs associated with both the cost of filing and enforcement. There is currently insufficient legal support for protecting such a shoe design in a format that can be accessed by those involved.

Together, these three case studies tell one story across three areas- domestic courts, foreign patent offices, and global luxury markets highlighting the same structural failure repeating itself.

THE PRODUCER BENEFIT PROBLEM

A. The Registration-Producer Disconnect

The Statement of Objects and Reasons of the 1999 Act declares its purpose as adding to the economic prosperity of producers of goods. Twenty-five years in, that purpose remains quite fa

Section 8 limits applicants to associations, producers' organisations, or statutory authorities; individual producers cannot apply independently. This shows up directly in the records of the GI Registry: the registered proprietor of Darjeeling Tea is the Tea Board of India; of Kolhapuri Chappal, the District Industries Centres of Kolhapur and Solapur; of Basmati Rice, APEDA.³⁷ In each of the most prominent Indian GI products, the registered proprietor is a government body. Eg., Tea Board for Darjeeling Tea, APEDA for Basmati Rice, District Industries Centres for Kohlapuri Chappals. The artisans, the farmer, the weaver- none of them holds the right the Act exists to protect.

There is a reason for this: individual producers generally lack the resources and legal infrastructure to file and maintain registrations. Institutional proprietors make administrative sense, but the consequence is a system where legal rights vest in bodies that do not make the goods, while the people who do make them have no standing under the Act unless they separately register as authorised users, a process that has its own problems.

³⁷ ²¹ Geographical Indications Registry, Application No. 1 (Darjeeling Tea); Application Nos. 222 and 223 (Kolhapuri Chappal), available at: <https://ipindia.gov.in/gi.htm> (last visited on June 24, 2026).

The Calcutta High Court in *Tea Board of India v. ITC Ltd.* observed that the whole object of the Act is producer prosperity, which is not achieved, giving producers a largely ceremonial role.³⁸

B. The Authorised User Mechanism

Section 17 was the answer of the legislature to the producer exclusion problem. A registered proprietor can apply to have anyone registered as an authorised user, giving producers a path to participate in the GI system without holding the registration itself. The path exists; using it is a different matter.³⁹

Getting registered as an authorised user costs money, a separate application, and a prescribed fee. The communities the framework is meant to include are typically the ones least positioned to pay it. More importantly, there is nothing in the Act requiring the registered proprietor to register producers at all. The Tea Board is not obliged to ensure Darjeeling tea garden workers hold authorised user status. That decision sits entirely unilaterally, with no mechanism of the Act to push it.

Even when someone can register their product or service, there are very few avenues of legal recourse available. In fact, the primary person with the right to bring an action against anyone infringing upon the registered mark is the registered owner themselves. Therefore, if that registered owner is a governmental entity operating on public funds and competing priorities for its administration (and thus is unable to take action), producers (who are essentially individuals) may have little to no ability to seek redress independently. The infrastructure was never built for that.⁴⁰

C. The Price Premium Problem

The economic rationale for GI protection is straightforward: geographic origin and reputation carry a price premium, and the registration assists producers to take advantage of this. There are good arguments in favour of it. There is strong evidence that a price premium exists in the most recognised GI products of India, but that it is not being realised by producers.

³⁸ *Tea Board of India v. ITC Ltd.*, 2019 SCC OnLine Cal 781.

³⁹ The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), s. 17.

⁴⁰ The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), s. 22.

Darjeeling tea commands among the highest per-kilogram prices of any tea traded globally, and the premium is real. Yet a 2007 FAO study found estate-level production costs of Rs. 200-225 per kilogram, while the premium accrued mainly to exporters, blenders, and retailers further down the chain, not to the workers who pick and process the leaf.⁴¹ The Act has no provision to send that premium back to them.

Despite holding one of the most internationally recognised textile GIs, they earn ordinary market wages for unregistered labour, while the GI premium is inherited by the traders and exporters who hold the buyer relationships.

COMPARATIVE ANALYSIS: THE EU MODEL AND WHAT INDIA CAN ADOPT

A. The EU Sui Generis System

The framework of EU under Council Regulation (EU) No 1151/2012 runs on three designations, each requiring a different level of geographical connection.

A Protected Designation of Origin requires the entire process which is raw material sourcing, production, preparation, all to happen within the defined area. For Parmigiano Reggiano, that means every stage from milking to aging occurs within the provinces of Parma, Reggio Emilia, Modena, and parts of Mantua and Bologna. The House of Lords supported the EU Court of Justice (CJEU) decision in *Consorzio del Prosciutto di Parma v. Asda Stores Ltd.* to state that P.D.O. may be extended so far as to require that goods are sliced and packaged within the geographic area where the goods were produced.

There is no equivalent provision under the Geographical Indications Act of India for protecting GIs. A producer could obtain Darjeeling tea leaves from Darjeeling, then mix these with cheaper tea varieties at its processing facility in Mumbai, then package those leaves and call it Darjeeling tea, provided that the Darjeeling origin of the tea leaves meets the technical definition.

⁴¹ Tarit Kumar Datta, "Darjeeling Tea: Linking Quality, Origin and Tradition" (FAO/SINER-GI, 2007) 8.

A Protected Geographical Indication requires only that at least one stage of production occurs within the defined area, which is a more flexible standard for products whose geographical connection operates primarily through reputation and tradition

A Protected Geographical Indication requires that at least one stage of production occurs within the defined area. This is a more flexible standard for products accruing their value through reputation. A Traditional Speciality Guaranteed protects traditional recipes and production methods without requiring any geographical link at all, a category the GI Act of India has no equivalent for, and one that would be valuable for products whose traditional character matters independently of where they are made.⁴²

B. Producer Group Rights, The Structural Difference

The more important difference between the EU system and the Indian system is not the number of designation categories but the enforcement standing.

Under EU Regulation 1151/2012, producer groups can take legal action by themselves in any country within the European Union to protect GI rights. The Consorzio del Prosciutto di Parma doesn't require assistance from the Italian Government when filing cases against unauthorised use of the Prosciutto di Parma name (in Dutch or German Courts); it can go alone. This type of enforcement takes place at the direction of the producers, as they are the ones who have the right to defend their trademark.

In India, the registered proprietor (usually a governmental organisation) is generally the only party authorised to bring an action for infringement. Thus, individual producers and authorised users rely on this proprietor to act on their behalf; if such proprietor fails to do so, then those producers/users are left with little option but to pursue the infringing parties.

The eAmbrosia database contains information regarding over 3500 EU GIs, including detailed information relative to producer group(s), product specification(s) and history(ies) of enforcement action(s). No similar database exists with respect to the Indian GI registry. In fact, you cannot search the Indian GI Registry to determine the number of actions brought under

⁴² Council Regulation (EU) No 1151/2012, art. 17.

Section 22 to seek an injunction or otherwise to obtain relief for violation of a registered geographical indication; you also cannot see how many were successful.

CHALLENGES AND THE CASE FOR REFORM

A. Pushing Article 23 Through Bilateral Treaties

The Article 23 extension India has been pushing since 2001 is going nowhere. At Doha, a negotiating mandate was secured to extend the higher protection standard — currently reserved for wines and spirits — to all GI products including agricultural goods and handicrafts. More than twenty years later, the US, Australia, Canada, and other countries with interests in using geographical names that developing countries claim as GIs have blocked any agreement.. The Doha Round itself collapsed without resolution on this and other contentious issues. India continues to raise the Article 23 extension in WTO TRIPS Council meetings, but the prospect of a multilateral agreement in the near term is not realistic.⁴³

The logical alternative is bilateral treaty-based GI protection, and India has already shown that this way works. The registration of Darjeeling tea as a Protected Geographical Indication under EU law in 2011, the first Indian GI product to receive EU protection, gives Darjeeling tea stronger protection in European markets than it receives under Indian law at home.⁴⁴

From the lessons drawn from EU registration in Darjeeling, it becomes clear that bilateral treaty negotiation can achieve results that can't be attained by multilateral negotiation. The ongoing Free Trade negotiations between India and the EU, the UK, Canada and others should treat the GI recognition provisions as non-negotiable terms.

B. Domestic Legislative Reform, Three Concrete Proposals

The international dimension of the GI problem cannot be resolved without addressing the domestic gaps. These legislative reforms would strengthen the Act without complete replacement.

⁴³ World Trade Organisation, TRIPS Council, "Extension of the Protection of Geographical Indications" (IP/C/W/204/Rev.1, October 2, 2000).

⁴⁴ European Commission, PGI Registration for Darjeeling Tea (2011), available at: <https://ec.europa.eu/eAmbrosia> (last visited on June 24, 2026).

There is an urgent need to fill in the "economic" gap. While section 22 provides rights holders with a basis upon which they can bring action against infringers, it does not require the proprietors to provide to the community that developed those GIs (as authorised users) some portion of the benefit from their use. An example of how this could be addressed immediately is through amending the statute to require proprietors to distribute a specified fraction of the revenue generated by their GIs as premium income to all authorised users. The Copyright Act of 1957, specifically section 35, is probably the closest precedent currently available on the issue of distributing author royalties to creators from collections managed by copyright collecting organisations.⁴⁵

The other significant modification that is needed is to alter Section 8 to allow producers or co-ops to register as co-producers together with the government entities. The Achilles' heel of the Act is the governmental monopoly on registration, which would be eliminated if it were linked to the people behind the products. This does not require any treaty or new institutions, but only the will of legislators – it is a matter of legislative will, not capacity; cooperative registration already exists in Indian law.⁴⁶

Another requirement is a dedicated GI Enforcement Authority under the DPIIT, with power to investigate misappropriation, including cross-border cases, without waiting for a complaint. Section 26 of the Competition Act, 2002, which gives the CCI the same power, is the model⁴⁷.

C. The Limits of Legal Reform, Infrastructure and Awareness

Legislative reform alone will not close the producer benefit gap. The problem is partly about cost but more fundamentally about awareness: most artisans and small farmers don't know that their products carry GI tags, what that means, or that they can register as authorised users.⁴⁸ Amended provisions stay inaccessible if producers don't know they exist.

A GI literacy programme, delivered through state agricultural networks and funded by the same welfare fund, is the non-legislative complement to statutory reform. Legal frameworks protect those who know they exist and can afford to use them.

⁴⁵ The Copyright Act, 1957 (Act 14 of 1957), s. 35.

⁴⁶ The Geographical Indications of Goods (Registration and Protection) Act, 1999 (Act 48 of 1999), s. 8. The

⁴⁷ The Competition Act, 2002 (Act 12 of 2003), s. 26. The

⁴⁸ Emilie Vandecastelaere et al. (eds.), *Worldwide Perspectives on Geographical Indications* (FAO, Rome, 2009) 47.

CONCLUSION

The 1999 Act was never meant to just create a registry. Its own Statement of Objects promised producers economic prosperity. Twenty-five years later, by its own measure, the Act hasn't been delivered. The Act has built a legal category but has not ensured that the people whose knowledge and craft give that category value actually share in what it generates.

Darjeeling tea, Basmati rice, and the Kolhapuri chappal make this hard to dismiss as a selective failure; these are the flagship GI products of India, the ones the law should protect best. The fact that Darjeeling tea fares better under EU rules than under the law of its own country is something that requires immediate alteration.

None of this calls for a new statute; the reforms proposed are corrections, not reinvention. The Act still lacks teeth. A GI tag that cannot reach a Prada runway, cannot mandate that a Darjeeling tea worker sees a rupee of the premium her labour creates, and cannot stop a Texas company from patenting centuries of subcontinental farming tradition- that is not protection but a system of excellent registry.

CHAPTER 3: SUSTAINABILITY, CULTURAL PRESERVATION AND THE FUTURE OF GI PROTECTION

BY DISHA S R AND SHINY B

INTRODUCTION

Geographical indications (GIs) are an emerging area of conflict between intellectual property law, sustainable development policy and cultural heritage conservation. In the last 20 years, the GI instrument was originally designed to signal the geographic origin and unique characteristics of agricultural products, wines and spirits, and has been deployed for much wider purposes, including rural development and preservation of biodiversity, adaptation to climate change, indigenous and traditional knowledge and practices, and digital traceability of food products. The empirical evidence of the relationship between GI protection and real sustainable development outcomes is still uneven and fragmented across disciplines⁴⁹, yet a growing literature makes the connection between GI and the United Nations Sustainable Development Goals⁵⁰.

GEOGRAPHICAL INDICATIONS AS A SUSTAINABLE INSTRUMENT: THEORETICAL FOUNDATION

A. Mapping the Field

A systematic literature review on GI sustainability literature using techniquecontext-characteristics-methodology analysis reveals that most of the scholarship is concentrated on limited SDGs, responsible production, decent work and economic growth, life

⁴⁹ M. Salpina, et.al., 'Mapping the Sustainability of Geographical Indication Products: A Systematic Literature Review' Discover Sustainability (Springer, 2025).

⁵⁰ Beck, et.al., 'Geographic Indications, Sustainability and Sustainable Development: A Bibliometric Analysis' Journal of Scientometric Research (2024).

on land and explicit climate action is comparatively less. The results of the complementary bibliometric analysis of 153 Web of Science records show that there is a long-standing imbalance between the economic and social analyses of GIs that dominate the literature and its environmental and governance analyses which are underdeveloped. The argument that GIs serve a dual purpose as economic tools and as means of cultural and economic preservation that will be echoed throughout this chapter is a further contribution⁵¹.

Belletti and Marescotti present GIs as a category of public good for which the sustainability benefits are not inherently linked to the GI per se, but rather the interventions of local actors and policies in the immediate vicinity of the GI, predictive of much of the literature reviewed later in this chapter⁵². Niederle and Gelain say GI specifications need to be flexible enough to account for the ecosystem shifts already underway due to climate stress and land use pressures: the dichotomy of fixity that GI law traditionally calls for and adaptability that sustainability needs⁵³. In *A Worldwide Perspective of Geographical Indications*, these threads are brought together and biodiversity, cultural heritage, environmental protection and tourism are put on equal footing in the current GI agenda⁵⁴.

B. Foundational Monographs

The book, *Relocating the Law of Geographical Indications*, by Dev Gangjee, remains the best doctrinal analysis of how GIs became a new category of IP rights under TRIPS, and how the doctrinal compromises that led to the adoption of Articles 22-24 came about⁵⁵. Gangjee's edited *Research Handbook on Intellectual Property and Geographical Indications* continues this analysis in various ways, including through the lens of terroir, history, legal systems and development⁵⁶. Calboli and Ng-Loy's edited collection focuses on the Old World/New World

⁵¹Chandima Shyamali Tennakoon, 'The Role of Geographical Indications in Promoting Sustainable Development: Intellectual Property Rights as a Tool for Economic and Cultural Preservation' *EPRA International Journal of Research & Development* (2024).

⁵² G. Belletti and A. Marescotti, 'Geographical Indications, Public Goods, and Sustainable Development: The Roles of Actors' *Strategies and Public Policies*'.

⁵³ P. Niederle and M. Gelain, on the importance of flexibility in geographical indication specifications for adapting to ecosystem change (2013), discussed in Cambridge Core's review of the geographical indication literature.

⁵⁴ 'Introduction' in *A Worldwide Perspective of Geographical Indications* (Springer, 2024).

⁵⁵ Dev Gangjee, *Relocating the Law of Geographical Indications* 1–25 (Cambridge Intellectual Property and Information Law Series No. 15, Cambridge University Press, 2012).

⁵⁶ Dev Gangjee (ed.), *Research Handbook on Intellectual Property and Geographical Indications* (Edward Elgar, 2016).

divide that is prevalent in the subsequent TRIPS extension debate of Section III below and addresses GIs explicitly “at the crossroads of trade, development, and culture”⁵⁷. The most comprehensive comparative regulatory account of food GIs is provided by Marsha Echols' treatment of food GIs⁵⁸, while the edited volume of van Caenegem and Cleary, discussed above, is the broadest single reference point for the field, in general⁵⁹. The chapter's first extended critical counterpoint is provided by Sarah Besky's *The Darjeeling Distinction* which explores the interactions between GI and fair-trade certification and the colonial plantation labour history of Indian tea production, a subject to which the latter section of the chapter will return⁶⁰.

CULTURAL HERITAGE, TRADITIONAL KNOWLEDGE AND INTANGIBLE CULTURAL EXPRESSION

A. Indigenous Food Culture and the Limits of the GI Instruments

A second thread in the literature asks if GIs can be a good vehicle for the protection of all intangible cultural heritages, in general, and indigenous food culture, in particular. The results of a field study in Taiwan and Mainland China with traditional indigenous food systems indicate that the protection of GI may help to sustain traditional food systems, provided that there are governance structures at the community level to retain decision-making power within the production communities themselves. GIs and collective marks are not explicitly mentioned in the SDGs framework presented in Section I⁶¹. Tregear and others come to similar conclusions in

⁵⁷ Irene Calboli and Wee Loon Ng-Loy (eds.), *Geographical Indications at the Crossroads of Trade, Development, and Culture* (Cambridge University Press, 2017).

⁵⁸ Marsha Echols, *Geographical Indications for Food Products: International Law and Regulation* (Kluwer Law International, 2008).

⁵⁹ W. van Caenegem and J. Cleary (eds.), *A Worldwide Perspective of Geographical Indications* (Springer, 2017/2024).

⁶⁰ Sarah Besky, *The Darjeeling Distinction: Labor and Justice on Fair-Trade Tea Plantations in India* (University of California Press, 2013).

⁶¹ X. He, et.al., ‘On the Study of the Sustainable Development of Intangible Cultural Heritage of Indigenous Peoples’ Diets — Take the Protection of Geographical Indications as an Example’ 14(19) *Sustainability* 12803 (2022).

their study examining the use of GIs and collective marks as a tool to preserve TK and TCEs in South American regions⁶².

B. International Instruments for Intangible Heritage

The intangible cultural heritage dimension of the protection of GIs cannot be explained without reference to the parallel international instruments not grounded in trade law. In Patricia Covarrubia's edited volume on transboundary heritage, the UNESCO 2003 Convention for the Safeguarding of the Intangible Cultural Heritage is placed next to GI protection, with the aim of highlighting that the two should not be separated, but rather integrated on a more comprehensive view⁶³. The 2003 Convention itself still continues to be the main international Convention in this space⁶⁴, complemented by the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions of 2005 which is the first international Convention to protect traditional expressions as such⁶⁵. The most authoritative single overview of the interaction between IP regimes and GI law⁶⁶ will be WIPO's own publication on the subject; and the ongoing, reportable text-based negotiations by the WIPO Intergovernmental Committee⁶⁷ on traditional knowledge, traditional cultural expressions, and genetic resources since 2010, which remain unresolved, shows the extent to which international consensus is still far from codifying these protections⁶⁸.

C. Scholarly Discussions on GI as a tool for Traditional Cultural Expressions

Daniel Gervais suggests that GI protection does not yet get us closer to the answer to the traditional knowledge question since it protects a signifier (a place) and not the knowledge itself⁶⁹. Daphne Zographos is even more sceptical on this subject, claiming that GIs were not

⁶² A. Tregear, et.al., 'Geographical Indications and Cultural Heritage' (ResearchGate, 2012; originally 2007).

⁶³ Patricia Covarrubia (ed.), *Transboundary Heritage and Intellectual Property Law: Safeguarding Intangible Cultural Heritage* (Routledge, 2020).

⁶⁴ UNESCO, *Convention for the Safeguarding of the Intangible Cultural Heritage* (2003).

⁶⁵ UNESCO, *Convention on the Protection and Promotion of the Diversity of Cultural Expressions* (2005).

⁶⁶ WIPO, *Intellectual Property and Genetic Resources, Traditional Knowledge and Traditional Cultural Expressions* (WIPO Publication No. 933, 2020).

⁶⁷ WIPO Intergovernmental Committee, discussed in 'The Indigenous World 2025: WIPO' (IWGIA, 2025).

⁶⁸ WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore, text-based negotiations..

⁶⁹ Daniel Gervais, 'Traditional Knowledge: Are We Closer to the Answers? The Potential Role of Geographical Indications' 15 *ILSA Journal of International and Comparative Law* (2009).

created for the purpose of protecting TCEs and that the incorporation of that protection into GIs could only lead to distortion of the two systems in her essay 'New Directions in Copyright Law' (NDCL)⁷⁰. Both comparative analyses, that of Toshiyuki Kono on the interface between GI and the intangible cultural heritage and that of Jon Garon on the comparison between the WIPO approach and the UNESCO⁷¹ approach to folklore protection, suggest that the two regimes are speaking past each other more than they are supporting one another⁷². In both copyright and trademark, as well as GI law, Foley & Lardner's easy-to-read legal overview of cultural heritage and intellectual property systems examines the implications of this mismatch of practice⁷³. As for the use of sandal designs from Kolhapuri, India, in a major fashion house, this is also cited in favour of a dedicated sui generis TCE protection regime in Nandini Parihar's paper for 2025⁷⁴. The empirical stakes of this debate are clearly demonstrated by the recent Chinese study of the measurable income and growth impact of the GI system in rural agricultural communities; even if the doctrinal flaws of the GI instrument are not of major consequence, its impact on the communities affected are very real⁷⁵. Covarrubia's comprehensive tangible/intangible heritage framework that was introduced in this section earlier, gives a helpful framework for reconciling these seemingly antithetical views, as it does not present the use of GI law versus a specific TCE regime as a dichotomy, but as two tools of partial solutions to a wider problem⁷⁶.

THE INTERNATIONAL LEGAL ARCHITECTURE: TRIPS, WIPO AND THE WTO

A. The TRIPS Extension Debate.

⁷⁰ Daphne Zographos, 'Can Geographical Indications Be a Viable Alternative for the Protection of Traditional Cultural Expressions?', in M. Macmillan and K. Bowrey (eds.), *New Directions in Copyright Law* (Edward Elgar, 2006).

⁷¹ Toshiyuki Kono, 'Geographical Indication and Intangible Cultural Heritage', in L. Ubertazzi and E. Muñoz Espada (eds.), *Le Indicazioni di Qualità degli Alimenti* (Giuffrè, 2009).

⁷² Jon M. Garon, 'Rethinking Intangible Cultural Heritage and Expressions of Folklore' (Nova Southeastern University).

⁷³ Foley & Lardner LLP, 'Cultural Heritage: Applicability of Intellectual Property Systems' (2024).

⁷⁴ Nandini Parihar, 'Safeguarding Traditional Cultural Expressions: An Analysis on IP Laws and Policy' (Vintage Legal, 2025).

⁷⁵ WIPO Creative Heritage Project, *Intellectual Property and the Safeguarding of Traditional Cultures* (WIPO Publication No. 1023).

⁷⁶ WIPO, *Intellectual Property and Traditional Cultural Expressions/Folklore* (WIPO Publication No. 913).

The WTO TRIPS Council's own review of proposals on this question is the key policy document in this area⁷⁷, to which every proposal for the reform of the WTO TRIPS Agreement should be compared, and the WTO's official guidance on Articles 22-24 provides the foundation for every legal framework that is proposed for reform⁷⁸. While Jain's UN Economic and Social Commission for Asia and the Pacific paper focus on the quest for "fair" market access to extension for the producers of developing countries⁷⁹, Escudero's previous and foundational T.R.A.D.E. working paper places the entire extension debate in the larger context of the history of developing countries interaction with IP negotiations⁸⁰. The UNCTAD/ICTSD review of the empirical evidence on the socio-economics of GIs in Europe, by Rangnekar, is classic reading for anyone evaluating the potential for delivering benefits to GIs from extension⁸¹; Blakeney's seminal work on GIs and TRIPS still remains foundational reading in the literature, specifically in the framing of the Old World/New World divide⁸². The Golden Gate University Annual Survey's treatment of the high-level protection extension puts this division into perspective on a comparative-law basis⁸³; Karmakar's case study of the textile GIs shows how the extension debate manifests itself in real life for goods that involve knowledge systems that are indigenous but not wine and spirits, and therefore might not be covered by the stronger protection⁸⁴. More than 11 years on from the first time they put it forward, Rangnekar and Josling's characterization of the overall debate as “an unfinished agenda” is a totally accurate description of where WTO talks are today⁸⁵.

B. Theory of Sustainable Development and Intellectual Property

⁷⁷ X. Yin, et.al., ‘Impacts of Geographical Indications on Agricultural Growth and Farmers’ Income in Rural China’ 14(1) Agriculture (MDPI, 2024).

⁷⁸ WTO TRIPS Council, ‘Geographical Indications: A Review of Proposals at the TRIPS Council — Extending Higher Protection’ (UNCTAD/ICTSD Capacity Building Project).

⁷⁹ WTO, ‘Geographical Indications’, TRIPS Agreement, arts. 22–24.

⁸⁰ A. Jain, ‘Effects of the Extension of Geographical Indications’ 16(2) Asia-Pacific Development Journal (UN ESCAP, 2007).

⁸¹ S. Escudero, ‘International Protection of Geographical Indications and Developing Countries’ (T.R.A.D.E. Working Paper, 2001).

⁸² D. Rangnekar, ‘The Socio-Economics of Geographical Indications: A Review of Empirical Evidence from Europe’ (UNCTAD/ICTSD Issue Paper No. 8, 2003).

⁸³ M. Blakeney, ‘Geographical Indications and TRIPS’ (Occasional Paper No. 8, Quaker UN Office, Geneva, 2001).

⁸⁴ ‘The Extension of High Level Protection of Geographical Indications’ XXI Golden Gate University Annual Survey of International and Comparative Law (2015).

⁸⁵ Suparna Karmakar, ‘Protecting Indigenous Knowledge through Geographical Indications: A Case Study of the Textile Industry in India’, in D. Ahn and H. Hall (eds.) (2014).

This chapter revisits the argument of Philippe Cullet, one of the most tenacious theoretical claims that GIs, if designed well, can help address traditional-knowledge issues within the general framework of trade-law (Section II) and cultural-heritage law (Section III)⁸⁶. The same argument is repeated, more applied, throughout the rest of this chapter at any point where a relationship between the formal IP doctrine and the developmental claims in support of the protection of GIs is required⁸⁷.

C. Enforcement Jurisprudence

The Court of Justice of the European Union's decision in *Scotch Whisky Association v Michael Klotz* (the *Glen Buchenbach* case) from 2018 is still the best guide to the circumstances in which a contested term evokes a registered GI even where it is not reproduced directly, and has been influential in the way courts around the world are dealing with indirect infringement claims⁸⁸. Indian case law has built up its own significant jurisprudence on GI infringement, notably in the two cases of the *Tea Board of India v ITC Ltd* and the *Scotch Whisky Association v Golden Bottling Ltd* where the principles of territorial protection were established and have been applied to the protection of Basmati rice⁸⁹. The initial analysis done by the American Society of International Law of the WTO protection for food GIs is still relevant to better understanding of the “generic-terms” exception, which tolerates assigning a generic name to a term like “Cheddar” in a market where it is not protected, and to the larger body of NAFTA protection that preceded the current USMCA⁹⁰. The 'spirited debate' over Champagne, Feta and Bourbon is all brought together in a classic account of the ‘how’ and the ‘why’ of international law's efforts to establish clear boundaries between ‘contested’ geographic terms⁹¹.

D. Reform Agendas and Governance Models

⁸⁶ D. Rangnekar and T. Josling, ‘Geographical Indications at the WTO: An Unfinished Agenda’.

⁸⁷ Philippe Cullet, *Intellectual Property Protection and Sustainable Development* (LexisNexis Butterworths, 2005).

⁸⁸ *Scotch Whisky Association v. Michael Klotz (Glen Buchenbach)*, Case C-44/17 (CJEU, 2018).

⁸⁹ TheLaw.Institute, ‘Decoding Infringement of Geographical Indications: Legal Implications and Remedies’ (2025).

⁹⁰ ASIL Insights, ‘Implications of the WTO Protections for Food Geographic Indications’ (American Society of International Law, 2002).

⁹¹ ‘Champagne, Feta, and Bourbon: The Spirited Debate about Geographical Indications’ (Law Review, via Scispace).

This chapter revisits the theme of the next frontier of GI governance (see Section VIII), as blockchain, the Internet of Things (IoT), and artificial intelligence (AI) are the next steps in the evolution of the instrument and its potential local impact on competitiveness, resilient food systems and sustainable living⁹². Le Goffic and Zappalaglio's comparative analysis of the United States' historically ambivalent attitude toward GI protection, versus the European Union's *sui generis* approach, continues to serve as a benchmark for comprehending the reasons for the difficulties in transatlantic GI negotiations⁹³. Zappalaglio's own account of the EU system as a “*sui generis*, bureaucratic” complex is embedded in a literature on the nature of IP as a complex adaptive system, and provides the most coherent theory to date of why the European model is so unyielding to the kind of flexible reform which climate adaptation may eventually demand⁹⁴. The Annual Review of Resource Economics’ recently released 2024 update on the economics of GIs synthesises the welfare effects, climate change implications and blockchain applications of the instrument in one state-of-the-art collection⁹⁵; the recent Sustainability special issue on GIs, public goods and sustainable development, guest-edited by Vandecastelaere and Kimura, collects an ongoing stream of peer-reviewed contributions on the very issues this chapter addresses⁹⁶. Together with the primary text of the Regulation (EU) 2024/1143⁹⁷, the European Commission's own description of the legislative reform of 2024⁹⁸ as well as Schoenherr's legal analysis of the Regulation is addressed in detail in Section VIII below⁹⁹.

TERRIOR, RURAL LIVELIHOODS AND THE TEQUILA/MEZCAL PARADIGM

⁹² Frontiers Research Topic, ‘Geographical Indications (GI) Tagged Agricultural Commodities: Global Status and Local Impacts on Competitiveness, Resilient Food Systems and Sustainable Livelihoods’ Frontiers in Sustainable Food Systems (2026).

⁹³ Caroline Le Goffic and Andrea Zappalaglio, ‘The Role Played by the US Government in Protecting Geographical Indications’ 98 World Development 35 (2017).

⁹⁴ Andrea Zappalaglio, ‘*Sui Generis*, Bureaucratic and Based on Origin: A Snapshot of the Nature of EU Geographical Indications’, in Intellectual Property as a Complex Adaptive System (2021).

⁹⁵ ‘The Economics of Geographical Indications: An Update’ Annual Review of Resource Economics (2024).

⁹⁶ E. Vandecastelaere and H. Kimura (eds.), ‘Geographical Indications, Public Goods, and Sustainable Development’ Sustainability (MDPI, Special Issue).

⁹⁷ European Commission, ‘Protecting Local Food and Drinks’ (EU Agriculture and Rural Development, 2024/2026).

⁹⁸ Schoenherr, ‘Geographical Indications: The Legal Protection of Cultural and Social Heritage’ (Lexology, 2024).

⁹⁹ Regulation (EU) 2024/1143 of the European Parliament and of the Council of 11 April 2024 on geographical indications for wine, spirit drinks and agricultural products.

A. Foundational Terroir Case Studies

The groundbreaking study by Bowen and Valenzuela Zapata on tequila as a terroir-based GI serves as the starting point for anyone studying tequila and GI protection, both because of the socioeconomic and ecological arguments for protecting GIs, and because of its ability to be co-opted by actors outside the region, not nominated by the local producers that it was conceived to serve¹⁰⁰. Bowen's later theoretical work recasts GIs as a more general form of 'territorial development strategy' for 'embedding local places in global spaces' and this has since become commonplace in the literature of rural development¹⁰¹. In Bowen and Gaytán's tequila case study, however, the focus extends past the tradition of tequila production to a sustained critique of how the protection of the GI can be achieved through a national identity narrative and global commodity chain instead of by communities of origin¹⁰²; Bowen's 2015 book *Divided Spirits* provides the most complete book-length account of tequila, mezcal, and the politics of production in Mexico synthesising over a decade of fieldwork into a canonical account¹⁰³. Barham's first and more broad-based discussion of the trans-border nature of terroir, derived from the French AOC experience, provides the conceptual language that the tequila literature will then use to discuss the Mexican situation¹⁰⁴.

B. Rural Industrial Development Beyond Europe and Mexico

Wong and Elbegsaikhan's comparative study on Taiwan and Mongolia illustrate the potential of using GI protection as a means to rural industrial development in contexts where the specific supply-chain structure and institutional capabilities can be very different from those usually considered in European literature¹⁰⁵. The recent literature reviewed by Boshnjaku and Dulja synthesises the three components of terroir, rural-community and GI linkages that emerged from

¹⁰⁰ Sarah Bowen and Ana Valenzuela Zapata, 'Geographical Indications, Terroir, and Socioeconomic and Ecological Sustainability: The Case of Tequila' 25(1) *Journal of Rural Studies* 108 (2009).

¹⁰¹ Sarah Bowen, 'Embedding Local Places in Global Spaces: Geographical Indications as a Territorial Development Strategy' 75(2) *Rural Sociology* 209 (2010).

¹⁰² Sarah Bowen and Marie Sarita Gaytán, 'The Paradox of Protection: National Identity, Global Commodity Chains, and the Tequila Industry' 59(1) *Social Problems* 70 (2012).

¹⁰³ Sarah Bowen, *Divided Spirits: Tequila, Mezcal, and the Politics of Production* (University of California Press, 2015).

¹⁰⁴ E. Barham, 'Translating Terroir: The Global Challenge of French AOC Labeling' (2003).

¹⁰⁵ C.Y. Wong and M. Elbegsaikhan, 'Geographical Indications in Development Contexts: Function, Supply Chain and Pursuit of Rural Industrial Development' 23 *Journal of World Intellectual Property* 712 (2020).

this wider comparative literature¹⁰⁶ and the propensity-score-matched analysis of Italian wine GIs by Belletti and others provide some of the strongest available quantitative evidence that it is territorial embeddedness, and not the legal designation per se, that accounts for the outcomes of local economic development¹⁰⁷.

C. Patrimonialisation and Indigenous Communities

Another though somewhat different branch of this study is about what scholars call the "patrimonialisation" of GI products, which involves the formal recognition of the product as cultural heritage that may be used to build or weaken indigenous community control. Sekine's study of Cordillera heirloom rice in the Philippines¹⁰⁸, which often has been referenced in the recent systematic review of *Discover Sustainability*, embodies both these scenarios: recognition has helped to maintain indigenous rice cultivation in the face of commercial pressure and recognition has created new tensions between heritage conservation and commercialisation, to which it is an open invitation¹⁰⁹.

FROM WHOM IS IT PROTECTING? WHO BENEFITS FROM GI PROTECTION?

A. The Plantation and The Legacy of Colonialism

In Besky's monograph 'The Darjeeling Distinction,' she looks at how GI and fair-trade certification co-exist and, in fact, can often be used to camouflage the labour relations of Indian tea production, which makes the product possible in the first place¹¹⁰. The value of her next

¹⁰⁶ E. Boshnjaku and X. Dulja, 'A Literature Review on Potential of Geographical Indications in Rural Development' XII(12) *European Academic Research* (2025).

¹⁰⁷ G. Belletti, et.al., 'Geographical Indications and Local Development: The Strength of Territorial Embeddedness' *Regional Studies* (2017).

¹⁰⁸ K. Sekine, "Geographical Indication and Patrimonialisation in Promoting the Sustainability of Indigenous Communities: The Case of Cordillera Heirloom Rice, Philippines," as cited in *Discover Sustainability* (Springer, 2025).

¹⁰⁹ Sarah Besky, "The Labor of Terroir and the Terroir of Labor: Geographical Indication and Darjeeling Tea Plantations" 31(1) *Agriculture and Human Values* 83 (2014).

¹¹⁰ G. Belletti and A. Marescotti, 'Geographical Indications, Public Goods, and Sustainable Development: The Roles of Actors' Strategies and Public Policies'.

journal article, entitled "*the labour of terroir and the terroir of labour*" is that it further elaborates on this point, demonstrating how the idealized relationship to place is systematically denied to the plantation labourers in marketing of this kind, which is central to the GI as development paradigm¹¹¹.

B. Power, Knowledge and Implementation Politics

In the study of Galapagos Islands coffee, Zinsli explores the ways in which scientific knowledge claims and development politics influence and shape and sometimes misrepresent the process of ground level protection of the GI, illustrating that the technical process of establishing the connection between the GI and terroir is itself a field of contested authority rather than a scientific exercise¹¹². The arguments that tequila protection has paradoxically contributed to the construction of a national identity narrative to promote the interests of states and corporations, as discussed in Section IV, are also part of this critical tradition. The "paradox of protection" argument of Bowen and Gaytn, which was introduced in Section IV and will be discussed below, is included in this critical tradition¹¹³. The idea of 'cultural biodiversity' in the discourse of GI is critiqued further by Mariani, Cerdan, and Peri, who contend that the rhetorical approach of cultural biodiversity often does not align with actual practices as it is claimed to represent¹¹⁴. Sood and Sharma's article in *Economic and Political Weekly* examines this literature through a gender and migration perspective, and conclude that the impact of GI protection can be significant in boosting the labour force participation of women and also the trends of urban migration in producing areas in India, which are not invariably reflected by the economic-impact studies highlighted in Section VII¹¹⁵. This offers a comparative analysis of geographical indications policies in the Global South.

¹¹¹ Matthew J Zinsli, "Authorizing the 'Taste of Place' for Galápagos Islands Coffee: Scientific Knowledge, Development Politics, and Power in Geographical Indication Implementation" 40(2) *Agriculture and Human Values* 581 (2022/2023).

¹¹² Sarah Bowen and Marie Sarita Gaytán, "The Paradox of Protection: National Identity, Global Commodity Chains, and the Tequila Industry" 59(1) *Social Problems* 70 (2012).

¹¹³ Mariagiulia Mariani, Claire Cerdan and Iuri Peri, "Cultural Biodiversity Unpacked, Separating Discourse from Practice" 39(2) *Agriculture and Human Values* 773 (2022).

¹¹⁴ Ekta Sood and Yogita Sharma, "Geographical Indicators as Tools of Economic Development" *Economic and Political Weekly* (SAGE, 2024).

¹¹⁵ Dominique Barjolle, Xiomara F Quiñones-Ruiz, Monique Bagal and Hermann Comoé, "The Role of the State for Geographical Indications of Coffee: Case Studies from Colombia and Kenya" 98 *World Development* 105 (2017).

GEOGRAPHICAL INDICATIONS IN THE GLOBAL SOUTH: COMPARATIVE GOVERNANCE MODELS

A. How the State is related to the economy and society.

The state's involvement in the governance of GIs is analysed in a large comparative literature, many of which have been published in a coordinated special issue of the *World Development*. Barjolle and others make this comparison with the role of the state in coffee GIs in the cases of Colombia and Kenya, with different institutional structures despite the similar nature of the GI instrument used in each country¹¹⁶. In the companion piece, Marie-Vivien and Binabe present a global overview of the various models of state and collective or hybrid governance of GIs, and find that there is no template that is always effective in the governance of GIs, and that institutional contexts matter more than the formal legal design¹¹⁷. Durand and Fournier take this comparative prism to Indonesia and Vietnam and question whether there is a real possibility of GIs to “modernise” agriculture in these countries, or whether the outcomes are largely driven by national and local government strategies independent of the GI instrument itself¹¹⁸.

B. Country Case Studies in the Middle East and Africa.

A number of country studies add empirical colouring to these comparative governance arguments. In Vietnam, Hoang and others' research with the Cao Phong orange shows measurable impacts of rural development due to the registration of GI¹¹⁹. The analysis by Yin and others of agricultural growth and the impact on farmers' incomes in rural China, in particular in the Yangtze River Delta (YRD), provides some of the most robust recent income-impact evidence found in the GI literature¹²⁰ and is confirmed by the more recent evaluation by Qie and

¹¹⁶ Id.

¹¹⁷ Delphine Marie-Vivien and Estelle Biénabe, "The Multifaceted Role of the State in the Protection of Geographical Indications: A Worldwide Review" 98 *World Development* 1 (2017).

¹¹⁸ Claire Durand and Stéphane Fournier, "Can Geographical Indications Modernize Indonesian and Vietnamese Agriculture? Analyzing the Role of National and Local Governments and Producers' Strategies" 98 *World Development* 93 (2017).

¹¹⁹ G Hoang, et.al., "The Impact of Geographical Indications on Sustainable Rural Development: A Case Study of the Vietnamese Cao Phong Orange" 12(11) *Sustainability* (MDPI, 2020).

¹²⁰ Xiaoyu Yin, et.al., "Impacts of Geographical Indications on Agricultural Growth and Farmers' Income in Rural China" 14(1) *Agriculture* (MDPI, 2024).

others of the same region's GI programme with updated income data¹²¹. Frick and Khor's analysis of the Indonesian coffee industry, however, comes to a more sobering conclusion: the protection of the GI provided growers only limited direct economic benefits, while the intangible benefits of cultural identity and recognition were more substantial¹²². The Darjeeling tea case, introduced in Section V above, comes back here in its institutional aspect, namely the WTO's case study on Darjeeling tea, which has recorded the extended trademark and GI registration proceedings in Japan and elsewhere in regard to the same unauthorised use and enforcement challenges¹²³; and the parallel case study on Darjeeling tea under WIPO¹²⁴.

C. Coffee, Tea, and Iconic Global South Case Studies

The survey reviewed the efforts of the specialty coffee sector in Ethiopia, Rwanda, Colombia, Jamaica, Brazil and Vietnam to use GI as a marketing tool, focusing on the terroir, cultural identity and producer empowerment as an integrated marketing strategy in the Cerrado Mineiro region of Brazil¹²⁵. The Ethiopian example is particularly well documented: the Ethiopian government's trademarking of the Harrar, Yirgacheffe and Sidamo coffee names is often cited as a rare example of an alternative to formal GI registration that has had a similar effect of protection; and the Ethiopian Commodity Exchange's (ECX) role in quality enforcement and traceability in Ethiopia is a parallel example¹²⁶. Finally, some of the very few quantitative data on the extent to which such alternative protection strategies actually benefit farmers comes from Gelaw's empirical conference paper on the effect of that trademarking strategy on export and producer prices in Ethiopia¹²⁷.

¹²¹ Hongkai Qie, et.al., "Evaluating the Impact of Agricultural Product Geographical Indication Program on Rural Income: A Case Study of the Yangtze River Delta Region in China" *Journal of the Knowledge Economy* (Springer, 2025).

¹²² T Frick and J Khor, "Geographical Indications and Value Capture in the Indonesia Coffee Sector" 59 *Journal of Rural Studies* 35 (2018).

¹²³ WTO, "Protecting the Geographical Indication for Darjeeling Tea" (WTO Case Study), available at: http://www.wto.org/english/res_e/booksp_e/casestudies_e/case16_e.htm.

¹²⁴ WIPO/WTO, "Case Study: Darjeeling Tea — Unauthorised Use in Japan and Enforcement Challenges," available at: <http://www.wto.org>.

¹²⁵ Perfect Daily Grind, "Why Geographical Indication Is an Effective Marketing Strategy for Specialty Coffee" (2025).

¹²⁶ G Mengistie, on the Ethiopian government's trademarking of coffee names — Harrar, Yirgacheffe, Sidamo — and the role of the Ethiopian Commodity Exchange (2012), as cited in *World Development* (2017).

¹²⁷ F Gelaw, "Impacts of Trademarking on Export and Producer Prices in Ethiopian Coffee," International Association of Agricultural Economists Conference, held at Vancouver, 2018.

THE CLIMATE CHANGE IS AN EXISTENTIAL CHALLENGE FOR PROTECTION OF TERROIR

A. The Climate-Terroir Problem

The challenge is well encapsulated in Clark and Kerr's 2017 foundational article, which states that the very agro-ecological conditions on which the link between the product and its geographic origin depends is being called into question by climate change, with only three adaptation options: adapt production within the same geographic area, move the production while keeping the same GI, or accept that the original link to geographic origin will be undermined over time¹²⁸. In his 2022 follow-up, Kerr refines this analysis to a legal, agronomic, and economic evaluation of the sustainability of the current GI specifications in the context of climate change, finding that most of them are not built to be adaptable enough to survive the changing climate¹²⁹. In the French wine industry, the early adaptation strategies are detailed in this chapter by Touzard and Ollat who propose to rethink the relationship to the origin of wines, with a more flexible and adapted specification of GIs, that still guarantees legal protection but allows more agronomic freedom of action¹³⁰.

B. Cross-sectoral Measures of Environmental Quality and Vulnerability

Salpina and Pagliacci's analysis of the impacts of climate change on agri-food GIs reveals great variability in the vulnerability of the products, as more sensitive and ecologically complex products are highly exposed while more standardised products are not as exposed¹³¹. Borghini et al.'s study of agri-food GIs vulnerability in the Veneto region of Italy provides a detailed illustration for the Veneto region¹³². The analysis of adaptation strategies already in place in

¹²⁸ LF Clark and WA Kerr, "Climate Change and Terroir: The Challenge of Adapting Geographical Indications" 20(3–4) *Journal of World Intellectual Property* 88 (2017).

¹²⁹ WA Kerr, "Are Geographical Indications Sustainable in the Face of Climate Change?" 12(2) *Queen Mary Journal of Intellectual Property* (2022).

¹³⁰ JM Touzard and N Ollat, "Terroir-Based Geographical Indications in the Face of Climate Change: The Narrow Path of a Strategic Reinterpretation of the Link to Origin," in *A Worldwide Perspective of Geographical Indications* ch 26 (Springer, 2022).

¹³¹ Salpina and Pagliacci, on the impact of climate change on agri-food geographical indications, *Land Use Policy* (2022)

¹³² Borghini, et.al., on climate change and the vulnerability of agri-food geographical indications — the Veneto, Italy case (2023).

French wine GIs by Ollat and others showed that some of the paths towards adaptation identified in theory by Clark and Kerr are already being implemented, although not to a uniform degree and not always with a clear legal basis¹³³. Ashenfelter and Storchmann's economic study of wine and weather and climate change provides the broad economic context in which these adaptation strategies can be evaluated and in which the value signals that the GI is expected to provide are directly related to weather variability¹³⁴.

FOOD SYSTEMS, ENVIRONMENTAL SUSTAINABILITY, BIODIVERSITY AND AGROECOLOGY

In addition to the particular issue of climate change, there is a wider literature that addresses the question of whether GI protection promotes or hinders environmental sustainability or the conservation of biodiversity more broadly. Bowen and De Master recognise that there is a structural tension between the static production forms that are often specified in GI and the cultural and agronomic flexibility required for the realisation of biodiversity preservation¹³⁵. The empirical investigation of the tension in the institutional analysis of mezcal production reveals that the informal governance institutions operating alongside, if not against, the formal GI framework are the ones that make the production of mezcal environmentally sustainable¹³⁶. In a preliminary examination of the role of intellectual property rights in trade, FAO places GIs at the heart of the food sovereignty and the developing-country capacity building agenda, predicting some of the issues of equity that are discussed in the critical literature examined in Section V¹³⁷. Van Caenegem and Nakano's producer perspective study poses an important question: is GI protection, de facto, an obstacle to sustainable production choices, or does it provide producers with an opportunity to make choices in its favor? From their research, they conclude that it

¹³³ N Ollat, et.al., on adaptation strategies in French wine geographical indications facing climate change (2021).

¹³⁴ O Ashenfelter and K Storchmann, "The Economics of Wine, Weather, and Climate Change" 10(1) *Review of Environmental Economics and Policy* 25 (2016).

¹³⁵ S Bowen and K De Master, on the tension between cultural preservation, static production forms, and geographical indication flexibility (2011), as discussed in Cambridge Core's review of the geographical indication literature.

¹³⁶ "Geographical Indications and Environmental Sustainability: An Institutional Analysis of Mezcal," available at: Academia.edu.

¹³⁷ FAO, "Trade-Related Intellectual Property Rights: Geographical Indications" ch 10 (FAO Technical Document, 2003).

largely depends on the discretion that the controlling body of each individual GI allows its producers¹³⁸. Conservation of endemic breeds and varieties (EBVs), such as the Neuquén Criollo goat in Argentina is a further important strand of the literature on the biodiversity aspects of food safety: a 2016 study in *Foods* finds that GI protection can provide an economic incentive to defy the standardisation pressures of globalised agriculture¹³⁹.

GASTRONOMY. FOOD TOURISM AND DESTINATION

GIs are becoming more and more used as tools on the production side but also as tools on the consumption side, as a symbol of destination identity and a considerable amount of literature has already been produced on the subject of food tourism and gastronomy heritage. The FAO and World Food Law Institute's 2019 symposium report combines the UNESCO-designated Coffee Cultural Landscape of Colombia, FAO's important agricultural heritage sites around the world, and the advocacy efforts by Slow Food USA to tell the story of how GI recognition enables destination formation¹⁴⁰. The effect size in Yilmaz and Sormaz's quantitative study is remarkable with a sixty per cent increase in gastronomy tourism perception associated with an increment of one unit in the local-food dimension of the recognition of the GI¹⁴¹. The case study on *Frontiers in Sustainable Food Systems* from Erzurum rosette of Turkey demonstrates the possibilities of combining the cultural dimension, the promotion of tourism and the protection of heritage within one product field, when gastronomic products are registered as GIs¹⁴². A similar branding analysis, which takes a more explicit view of the GI recognition as a tool for maximising IP value in gastronomy tourism, perceives cultural heritage framing as a commercial resource itself¹⁴³. Based on the results of two additional systematic reviews, one on the intersection of

¹³⁸ W van Caenegem and K Nakano, on geographical indications, innovation, and producer perspectives on whether geographical indication protection hinders environmentally sustainable production (2020), as discussed in Cambridge Core's review of the geographical indication literature.

¹³⁹ "The Role of Geographical Indication in Supporting Food Safety: A Not Taken for Granted Nexus" *Foods* (MDPI, via PMC/NIH, 2016).

¹⁴⁰ FAO and World Food Law Institute, "Geographical Indications and Gastro-Tourism: Possibilities for Local Development" (Symposium Report, Washington DC, 2019).

¹⁴¹ G Yilmaz and U Sormaz, "The Effects of Local Food and Local Products with Geographical Indication on the Development of Tourism Gastronomy" 13(12) *Sustainability* 6692 (2021).

¹⁴² "Challenges and Opportunities in Geographical Indication Registered Gastronomic Products: Erzurum Rosette" *Frontiers in Sustainable Food Systems* (2024).

¹⁴³ "Geographical Indication for Gastronomy Tourism: Maximising Intellectual Property Value and Branding" *Academy of Accounting and Financial Studies Journal* (2022).

food tourism and regional development, and with a focus on the effect of PDO and PGI recognition on regional food identity and creative food clusters¹⁴⁴ and an earlier systematic review focused on the Turkish gastronomy tourism literature through Web of Science and the Turkish national index¹⁴⁵, it is established that this is one of the most vibrant sub-fields of the broader GI-sustainability literature.

Geographical indications (GIs) are an emerging area of conflict between intellectual property law, sustainable development policy and cultural heritage conservation. In the last 20 years, the GI instrument was originally designed to signal the geographic origin and unique characteristics of agricultural products, wines and spirits, and has been deployed for much wider purposes, including rural development and preservation of biodiversity, adaptation to climate change, indigenous and traditional knowledge and practices, and digital traceability of food products. The empirical evidence of the relationship between GI protection and real sustainable development outcomes is still uneven and fragmented across disciplines, yet a growing literature makes the connection between GI and the United Nations Sustainable Development Goals. Depending on IP's analysis of the international trade impacts of GIs frames these digital and regulatory developments as two sides of the same coin: blockchain, GPS-based verification, and real-time authentication are, in this account, the practical technologies through which the EU's expanded legislative ambitions for GI protection will actually be implemented and enforced on the ground¹⁴⁶.

CONCLUSION: TOWARD THE FUTURE OF GI PROTECTION

Taken together, this body of scholarship suggests that the future of GI protection will not be settled by any single reform, whether at the level of TRIPS extension, climate-adaptive specification drafting, or blockchain-enabled traceability. It will instead be determined by whether GI governance can hold these multiple, sometimes competing, objectives in balance: trade protection and cultural justice, market access and ecological adaptability, technological modernisation and producer-level equity. The chapters and case studies surveyed here suggest

¹⁴⁴ "Food Tourism and Regional Development: A Systematic Literature Review" (Academia.edu, 2025).

¹⁴⁵ "The Importance of Geographical Indication in Gastronomy Tourism: Turkey" (ResearchGate, 2016).

¹⁴⁶ Depenning IP, "International Trade Impacts of Geographical Indications" (2026).

that this balance has been struck successfully often enough to justify continued investment in the instrument-and failed often enough to counsel real caution against treating GI registration as a sufficient, rather than merely a necessary, condition for sustainable and culturally just rural development.

Part II –

Design Protection in Creative and Digital

Industries

CHAPTER 4: INDUSTRIAL DESIGN PROTECTION IN THE INNOVATION ECONOMY

BY ANUBHA SINGH

INTRODUCTION

Understanding Industrial Designs

When we talk about the designs this does not mean that we only talk about the logos, it is a unique design that represents every business in it's a unique way. Industrial design means the visual representation of a product of the industry. Its work is to attract the customers towards the product. It focuses on the style, shape and pattern also including the other features like pattern, shape configuration, colour which applied on the article. The exclusive right that owner gains to use that design helps the owner to take legal action against anyone who tries to copy your work without your permission.

For a good design to influence the customers decision to buy the products many companies invest their time and efforts in designing the products for a modern and stylish to look different from others in market¹⁴⁷.

Meaning of Industrial Design Protection

Industrial design protection is explained with various legal rights, its purpose and objectives of design laws and with the explaining economic and commercial significance. By offering legal protection to designers and manufacturers against unauthorised copying or replication of their creations, design protection promotes innovation and creativity in the design industry. It also

¹⁴⁷ Intellect Bastion LLP, 2026. What is Industrial Design and How to protect it?. *blogs* , 16 April.

allows customers to recognise and differentiate products based on their visual look and design aspects.

The Design Act of 2000, Section 2(d). This section defines design as "any features of shape, configuration, pattern, ornament, or composition of lines or colours applied to any article, whether in two-dimensional, three-dimensional, or both forms, by any industrial process or means that appeals to the eye and can be judged by the eye."¹⁴⁸

Legal Development of Industrial Design Protection

This development starts with the first law in India granting the exclusive rights for new patterns was the Design Act, 1872. The new manufacture was recognised as any original pattern, design or its application to articles of manufacture. This legislation over a period of time underwent several amendments, which led to the establishment of the Controller General for Intellectual Property, this centralized the registration and administration of IPR, this helps to ensure the implication of law in a uniform way and the Patent and design Rules, 1933 were introduced. Further, Design Act, 2000 excluded artistic works which were protected and defined the definition of design under the Copyright Act, 1957.¹⁴⁹

THEORETICAL FOUNDATIONS

IPR Framework

Intellectual Property rights allow the creators or owners to have the benefits from their works when these are exploited commercially. Intellectual Property rights reward creativity & human endeavour which fuel the progress of humankind. Intellectual property is classified into Patent, Industrial Design, Trade Marks, Copyright, Geographical Indications, Layout Designs of Integrated Circuits, Protection of Undisclosed Information/Trade Secret. These rights are statutory rights governed in accordance with the provisions of corresponding legislation. For the protection of intellectual property, the Government of India has enacted effective IPR Laws.

¹⁴⁸ CHAUHAN, N., 2023. AN OVERVIEW OF THE DESIGN ACT OF 2000 and landmark cases. *INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS*, 2 (7).

¹⁴⁹ Sarkar, S., 2016 . History and Evolution of Industrial Designs in India. *GLOBAL JOURNAL FOR RESEARCH ANALYSIS*, volume 5(issues 11)..

The registration and protection of industrial designs in India is administered by the office of the Controller General of Patents, Designs and Trademarks under the Designs Act, 2000 and corresponding Designs Rules, 2001. The Act and the Rules are enacted with the object of protecting new or original designs so created to be applied or applicable to particular articles to be manufactured by Industrial Process or means. Sometimes purchase of articles for use is influenced not only by their practical efficiency but also by their appearance. The important purpose of design Registration is to see that the artisan, creator, originator of a design having aesthetic look is not deprived of his bonafide reward by others applying it to their goods.¹⁵⁰

International Design Protection: Global Level

Industrial design at international level is being developed by different theories of protection the industrial design we saw different statues at international level like intellectual property triumvirate of patents, copyright and trademarks with other statues that are Patent law, Copyright law, Trademark law all these laws protect the originality and creativity of the design and designer both. The different aspect to discuss about the legal at international is seen with discussing some important criteria for the protection the criteria mention about the creative standard, the aspect of design which deserves protection, the intersection between design and copyright law.¹⁵¹ Every country follows different laws to protect the design law as it may at debatable issues but its primary focus is to protect the design and growth of the industry by focusing on the design.

TREATIES AND AGREEMENT: INTERNATIONAL LEVEL

1. Paris Convention, 1883

The Paris Convention for the Protection of Industrial Property, 1883 was the first international convention which discussed and recognised the concept of industrial property. The Paris Convention, concluded in 1883, was revised at Brussels in 1900, at Washington in 1911, at The Hague in 1925, at London in 1934, at Lisbon in 1958, and at Stockholm in 1967. It further included another provision that compulsorily required member states to provide protection for

¹⁵⁰ Anon., 2020. Industrial Design – An Imperative IP Right. May.

¹⁵¹ Monseau, S., 2012. THE CHALLENGE OF PROTECTING INDUSTRIAL DESIGN IN A GLOBAL ECONOMY. *Texas Intellectual Property Law Journal*, p. 495.

industrial designs. India is a member of the Paris Convention, so it needs to follow the mandate of protecting industrial designs. Thus, the provisions for the right of priority are applicable, as, on the basis of a regular first application filed in one of the contracting states, the applicant may within the next six months apply for protection in other contracting states, and the latter application will be regarded as if it had been filed on the same day as the first application.

2. Geneva Act, 1999

Another important international registration system that built a foundation for the protection of industrial property on a global basis is the Geneva Act of the Hague Agreement concerning the international registration of industrial designs, which was adopted in 1999. This Agreement was governed by the International Bureau of World Intellectual Property Organisation (WIPO). The international registration obtained under this Agreement produces the same effects in each of the designated countries as if it were registered in that country.

3. TRIPS Agreement, 1995

Next in line was the TRIPS Agreement, which provided for minimum standards for the protection of industrial designs. The TRIPS Agreement came into effect on 1 January 1995. The TRIPS Agreement protects intellectual property in trade-related regions to a large extent and is regarded as a comprehensive new framework for intellectual property protection. While incorporating the minimum standard provisions of the TRIPS Agreement, in India, the Designs Act, 2000 was passed in light of the rapid changes in technology. Article 25 and Article 26 deal with the subject matter of industrial design. It mentions that members can frame their domestic laws related to industrial design in extensive form as well. It also includes provisions for infringement of design as well as a term of protection for design.¹⁵²

INDUSTRIAL DESIGN PROTECTION IN INDIA

Historical Development of Design Law in India

¹⁵² Gupta, A., 2023. Industrial design in IPR. 11 11.

The need to protect new designs was felt in India as early as the 18th century where in the legislation enacted the Patterns and Designs Protection Act, 1872 for the first time. The Act provided the inventors of new patterns and design in India, the exclusive privilege of making, selling and using the invention in Indian or authorizing others to do so for a shorter duration of time. This Act was followed by the Inventions and Designs Act, 1888 which consolidated and amended the law relating to the protection of inventions and designs and contained a provision relating to design in a separate part. The Act of 1888 was replaced by the British Patent and Designs Act, 1907 which became the basis of the Indian Patent and Designs Act, 1911. The patent provisions of the 1911 Act were repealed by the Patent Act, 1970. The Designs Act, 2000 repealed the Designs Act, 1911. The Act came into force on 11 May, 2001.¹⁵³

Registration of Industrial Designs

The registration and cancellation of the industrial designs in India is governed under the Designs Act, 2000, which provides a well- defined legal framework for protecting original and innovative designs. Section 4 to 11 of the Act deals with the registration process.

The first step starts with the filing an application at the Design office of the Indian patent office, with the clear representation of the context in the application along with the applicant's name, address and other personal details.

The second step is to submit the application and after application submission this will undergo a formal examination to verify the details and designs and other mentioned details which includes payment of prescribed fees and submission of documents.

The third stage starts after the examination or verification of the details; a substantive examination is conducted, where designs are assessed for novelty, originality, visual appeal and its capability of being applied to an article through an industrial process.

After this there are two scenarios seen first is, if the design satisfies the legal requirements, then it is published in the designs Journal for public notice. Any person may oppose the registration during the prescribed time. And the second scenario says, if no valid opposition is received, or if the objections are dismissed, the design is registered and a certificate of registration is issued.

¹⁵³ Sarkar, S., 2016. History and Evolution of Industrial Designs in India. *GLOBAL JOURNAL FOR RESEARCH ANALYSIS*, 5(11), pp. 265-266.

The registered proprietor is then granted exclusive rights over the design for an initial period of ten years, which can be extended by five additional years, providing protection for a maximum of fifteen years.¹⁵⁴

Cancellation of Registered Design

To cancel a registered design, a petition has to be made to the Controller of Designs. If the cancellation proceedings are unsuccessful before the Controller of Designs, then an appeal can be filed in the high court.

Any person can file for cancellation of a registered design on the following grounds, as mentioned under Section 19 of the Designs Act, 2000:

1. The design is not new.
2. The design is previously registered in India.
3. The design is already in the public domain
4. The design does not fall under the subject matter of design as defined under Section 2 (d) of the Act
5. The design is not registrable under this Act. For example, stamps and emblems are not designs, as these are not finished goods and hence not registrable under the Designs Act, 2000.¹⁵⁵

INDUSTRIAL DESIGN PROTECTION IN SELECTED JURISDICTION; COMPARITIVE STUDY

Industrial Design Protection in the United States

The US has the world's biggest design industry but still it faces the problem of design protection. It is still not in the development phase at past times but US intellectual property laws

¹⁵⁴ CHAUHAN, N., 2023. AN OVERVIEW OF THE DESIGN ACT OF 2000 and landmark cases. *INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS*, 2 (7).

¹⁵⁵ Gupta, A., 2023. Industrial design in IPR. 11 11.

are acknowledged and enforcement has been done against the piracy. From fighting the past issues related to the industrial protection laws US has developed and redesigned its copyright and patent law including the trademark law where the US legislative and judicial actions plays an important role. The issues for redesigning US law to properly protect industrial designs are the design piracy affect's all design, lack of coherence in the US legal protection, and the goals for redesigning the law as mentioned that to bring balance and limited protection, no registration requirement, brings flexible types of protection and last the originality and remedies under this act. IDPPPA is the first U.S. bill to drop the registration requirement for protecting design. Registration is a formal step requiring knowledge of the law and--in all likelihood--the need to retain an attorney.¹⁵⁶

Industrial Design Protection in the Germany

This Law provides that the subject of protection is any “draft or model, which is novel and original only”. The subject of protection by this Law is “draft or model” (Muster order Model). The draft is two dimensional (plane) and the model is three dimensional. The term “design” (Geschmacksmuster) is used as a higher concept of draft or model. The Design Law (Geschmacksmustergesetz) was established in 1876 and partially revised in 1953, and on July 1, 1988 the wholly revised Law came into effect.

- (1) In order to obtain design registration, not only foreigners but also German nationals must submit an application form to the German Patent and Trade Mark Office and at the same time deposit drawings or photographs representing the design. This deposit can be done either as one unsealed or sealed. Sealed deposits will be opened three years after the filing date.
- (2) In the case of a plane design, a sample can be deposited instead of drawings or photographs, but there must be less than fifty in one package weighing less than ten kilograms.
- (3) In order to obtain registration, the design must be novel and original, but substantive examination is not given.

¹⁵⁶ Monseau, S., 2012. THE CHALLENGE OF PROTECTING INDUSTRIAL DESIGN IN A GLOBAL ECONOMY. *Texas*

(4) One of the characteristics of the German Design Law is the non-substantive examination system, and another is variations deriving from one design may be filed in one application, but in the same class only. The scope of variation is not practically clear, and it is irrelevant to a similar design under the Japanese Design Law.

(5) Design rights are derived from an application and the term initially lasts five years. However, they may be renewed three times for a maximum of twenty years.

- As to “typeface”, Germany started its registration on July 7, 1981 through a special law called “Schriftzeichengesetz”, which was formally incorporated into the Design Law in 1988. Design rights for typefaces last twenty-five years at maximum (Article 9 (1) of the Vienna Convention provides for a maximum of fifteen years, but its protocol provides for one of twenty-five years¹⁵⁷.

LANDMARK JUDGMENTS

Indian Cases

1. Bharat Glass Tube Limited v Gopal Glass Works Limited (2008)

Facts

Gopal Glass Works applied to register a diamond-shaped pattern on a flat glass sheet dated on 29 October 2002, Registration granted on 5 November 2002 by the Controller of Designs. IAG Glass Co. contended that the design was not new or original, having been previously published by a German firm, Dornbusch Gravuren GmbH. Evidence cited in the case were

- a. A 1992 catalogue of Dornbusch Gravuren (showing the roller design).
- b. A letter dated 10 September 2003 from the German company confirming development in 1992.
- c. A UK Patent Office record (downloaded 22 September 2004) indicating UK registration of a similar design in 1992.¹⁵⁸

¹⁵⁷ Anon., 2003. *Treaties and Conventions for protection of industrial designs and the protection system in major countries*, s.l.: Japan Patent Office, Asia- pacific property centre, JIII.

¹⁵⁸ Madhavi, 2025. Bharat Glass Tube Limited v. Gopal Glass Works Limited, s.l.: LawBhoomi .

Issues

- (i) Whether the design was not new or original in view of the fact that the roller bearing the design is published before the date of registration and the registered proprietor is not owner of design.
- (ii) Whether the design was published outside India as well as in India prior to the date of application.
- (iii) Whether the registered design was in public domain due to sale/use of the design prior to the date of application of the registered proprietor.¹⁵⁹

Held

The Supreme Court dismissed the appeal with costs of Rs. 50,000, affirming the validity of Gopal Glass Works Ltd.'s registered design. The German company only manufactured rollers but never used them to produce glass sheets. No evidence was provided that the same pattern was ever used on glass sheets before registration. The UK Patent document was merely a design registration and not proof of its application on glass. The Assistant Controller failed to assess the visual appeal of the finished product, which is a statutory requirement under Section 4 of the Designs Act, 2000.¹⁶⁰

2. S D Containers Indore v Mold Tek Packaging Ltd. (2020)

Facts

The plaintiff Mold Tek Packing Ltd, filed suit at Indore against the SD Containers Indore from copying and using the registered design where the registrations were asserted valid under the Design Act, 2000. Defendant filed with the counter claim, the section where it filed was under section 4 (a), Section 22(4) read with Section 19(2) seeking to transfer the case to the high court. The High Court, relying upon Godrej Sara Lee Ltd., held that cancellation proceedings lie exclusively before the Controller of Designs and that the Commercial Court retained jurisdiction. This led to the present appeal before the Supreme Court, questioning both the interpretation of

¹⁵⁹ Bharat Glass Tube Limited v. Gopal Glass Works Limited (2008) <http://JUDIS.NIC.IN> .

¹⁶⁰ Suman, A. A. A., 2025. Bharat Glass Tube Ltd. Vs. Gopal Glass Works Ltd. : Burden of proving prior publication of Registered Design is on the Petitioner for rectification, s.l.: IP ADJUTOR, IPR LEGAL CASE UPDATE

statutory provisions and the territorial jurisdiction of the High Court to which the suit was transferred.

Issues

1. Whether the design infringement involved in civil court must be transferred to high court under Section 19?
2. Whether the Commercial Courts Act, 2015 overrides the mandatory transfer mechanism under Section 22(4) of the Design Act, 2000?
3. Which of the High court possessed the territorial jurisdiction of the case transferred under Section 22(4)

Judgment

It was held that the statutory interpretation in Section 22(4) brings the transfer of a suit to the High court when revocation grounds are made under the Section 19. It is also said that commercial courts Act does not has the authority to override this in the absence of inconsistency and also the it says that the jurisdiction will lies on the High court where the cause of action arose¹⁶¹

3. Reckitt Benckiser (India) Ltd. v. Wyeth Ltd. (2013)

Facts

Under this case, the issue was related to the registration of S-shaped spatulas. The defendant in this case i.e. Wyeth Ltd. claimed that the appellant's design was not original as it has already been registered in a foreign country before its registration in India. And also, there was the suppression of facts regarding the prior registration in a foreign country.¹⁶²

Issues

1. Whether a design previously registered abroad is grounds under Section 19(1) (A) of the Act for cancellation of a design subsequently registered in India?

¹⁶¹ *S. D. Containers Indore v. M/s Mold Tek Packaging Ltd.*, [2020] 12 SCR 1104 (2025) Antavya Singh.

¹⁶² Singh, S., 2020. A critical analysis of design protection laws in India, s.l.: iPleader blogs.

2. What are the consequences of failure to apply for registration in India within six months of making an application in a conventional country?
3. What are the consequences of failure to apply for registration in India within six months of making an application in a conventional country?
4. Whether documents existing in the records of Registrar of Designs in a convention country abroad which are open to public inspection result in prior publication?¹⁶³

Judgment

The Court held that if it can be shown that the design was disclosed anywhere in India or a foreign country by means mentioned under Section 4(b) then the registration in India would be considered to be cancelled and it can be sought as a defence against alleged infringement under Section 22(3).¹⁶⁴

4. Sree Vishnu Bottles v. The State Of Tamil Nadu (2012)

Facts

This case deals with the rights of re-sellers. The petitioners have a business of buying empty beer bottles and paper from Tamil Nadu and transporting it to Karnataka and Madhya Pradesh. They have been doing this business smoothly for 30 yrs without any interruption in crossing borders until recently when they were stopped. And the reason for the disruption is that some bottles were registered as designs under the Designs Act. They were held liable for piracy of registered designs under Section 22 of the Design Act. They said that no one can be stopped from transporting empty bottles in such a fashion even when there is no injunction from the Court.¹⁶⁵

Issues

1. Whether the role of the police could lead to the prevention of the state order for transportation.
2. Whether under Section 22 of Design Act, 2000, transportation of the bottle amounts to infringement of the registered design.

¹⁶³ Raje, S., 2019. Reckitt Benkiser India Ltd vs. Wyeth Ltd.. Law Times Journal .

¹⁶⁴ Singh, S., 2020. A critical analysis of design protection laws in India, s.l.: iPleader blogs.

¹⁶⁵ Singh, S., 2020. A critical analysis of design protection laws in India, s.l.: iPleader blogs.

3. Whether writ of mandamus was entitled by the petitioners for directing the states and police for interference purposes.

Judgment

It was held that the high court found unrestricted transport to be vague under the petitioner's request and also declining the issue with highlighting the legal relief related to registered designs in the specificity requirement.¹⁶⁶

5. Whirlpool India Limited v. Videocon Industries Limited (2014)

Facts

The Petitioner had registered two designs for its washing machine on July 15, 2009. These machines hold the distinctive design of Whirlpool washing Machines. This shows the creativity of the petitioner. In July 2012, the petitioner got to know about the design of the brand name Videocon Pebble, under the Videocon Industries Limited. The examination of both industries' washing machines has been done which later found out, the petitioner says to the defendant they replicated the specific combination of the design including all the other criteria of the manufacturing of the machine. Consequently, the petitioner Whirlpool files suit in the Bombay High court seeking the relief against Videocon Industries Limited, under Design Act, 2000.

Issues

1. Whether the registered design of Whirlpool under Design Act, 2000 was original and the defendant action does amount to the passing off into design infringement.
2. Whether washing machine design of Videocon's constituted an infringement of Whirlpool's registered design.
3. Whether Section 22 of Design Act, 2000 a suit of infringement could be maintained against the person who had obtained subsequent registration for their own design.¹⁶⁷

Judgment

¹⁶⁶ Anon., n.d. *Unveiling the Shield: The Intricacies of Design Registration in India!*, s.l.: Kumar & Sardana Associates (KSA).

¹⁶⁷ G, V. V., 2026. *Whirlpool of India Ltd. v. Videocon Industries Ltd. (2012- 2014)*, s.l.: Record Of Law.

It was held that the Whirlpool design is original and said that adding of some ornament or changing the colour does not sufficiently differentiate the defendant product. The court also said that similarity between the machines constituted a misrepresentation, supporting the plaintiff claim.¹⁶⁸

International Case Studies

1. Apple Inc. v. Samsung Electronics Co. (United States, 2012–2016)

Facts

In April 2011, Apple sued Samsung for the infringement of the Apple patents on the counter claim was filed by Samsung for the infringement of several of its own patents. The trial of these cases started from July 30, 2012 where in August 2012, the result was in Apple favour and also the jury rejected the Samsung counterclaim. Later in December Apple files the appeals for the permanent solution which carry on with the time.¹⁶⁹

Issues

1. Whether the Apple design which was registered was actually infringed by Samsung.
2. How damages for design patent infringement should be calculated.
3. Whether profits should be awarded on the entire product or only on the infringing component.

Judgment

In this case it was held that multicomponent product, the relevant of article of manufacture is seen for the arriving at the damages that need not to be the end of the product to sold to the consumer but it may also be only a component of that product¹⁷⁰

2. PepsiCo Inc. v. Grupo Promer Mon Graphic SA (European Union, 2011)

Facts

In this case there was a dispute between the two designs of the two different companies. The designs are related to the name “pogs”. The Promer first requested the PepsiCo RCD a

¹⁶⁸ Singh, G., n.d. *Whirlpool India vs Videocon Industries – Case Explained*, s.l.: Writing law .

¹⁶⁹ Anon., n.d. *APPLE INC v. SAMSUNG ELECTRONICS CO LTD LLC (2013)*, s.l.: FindLaw.

¹⁷⁰ Anon., n.d. *Apple, Inc. v. Samsung Elec. Co., Ltd., No. 15-1171 (Fed. Cir. 2016)*, s.l.: Justia .

declaration of invalidity based on some dispute's cancellation. The Division of the office for harmonization in the internal Market declared PepsiCo RCD to be invalid. Later the PepsiCo appealed to the Board of Appeal, which resulted in the favour of the PepsiCo. Later the Promer appealed the Board's decision to the General court.

Issues

1. What standard should be applied to assess infringement of a registered Community Design?
2. Whether the competing designs created a different overall impression on the informed user.
3. The extent of protection granted to industrial designs with limited design freedom.

Judgment

In this case the decision made was against the PepsiCo as it states that it relies on a single ground of appeal. This case is also the first substantive decision of CJEU on Registered Community Designs (RCDs). The court also provides a clear description of the informer users and its imperfect recollection when assessing the infringement and comparison of the actual product.¹⁷¹

3. Karen Millen Fashions Ltd v. Dunnes Stores (European Union, 2014)

Facts

In this case the plaintiff Karen Millen Fashions has the UK head quarter, which is a women 's fashion brand that trades over 65 countries. It started selling two kinds of striped shirts that began to sell in 2005. The Dunnes', the Irish fashion, buy these t-shirts for example but it started to sell these products as their products. In 2007 Karen brought proceedings against the Duren in the High court and the judgement was in favour of the Karen. After this the Duren appealed to the Supreme Court.

Issues

1. Whether unregistered Community designs enjoy protection without proof of individual character against every prior design.
2. Who originally had the burden of proof for this design.

¹⁷¹ Matthijs Marell, B. & B., 2011. *CJEU Defines "Informed User" Concept in Pepsi Registered Community Design Dispute*, s.l.: Bloomberg Law .

3. Whether the validity of an unregistered community design, is the owner to prove, the matter of facts that to have the individual character.¹⁷²

Judgment

The CJEU's decision, while framed in the context of UCD, applies equally to the assessment of individual character of RCDs and harmonized designs under the Design Directive (98/71). It sets a high hurdle for a party wanting to challenge the individual character of a design. The burden of proof is on that party to show that the design does not have individual character, which it will have to prove by reference to specific, earlier designs taken individually, rather than seeking to combine a number of features from the ‘design corpus’ as a whole. This is a particularly important finding for the fashion industry—where it is common for designers to draw on design aspects from a range of previous collections—but also for other design-led industries.¹⁷³

4. Cofemel – Sociedade de Vestuário SA v. G-Star Raw CV (European Union, 2019)

Facts

The world-famous jeans producer G-Star has sued its competitor because the latter was producing similar designs of jeans and T-shirts. The Portuguese court, to which the case was handed, said that the works of applied arts, industrial designs and design works can without doubt be copyrighted. However, the court was not sure to what extent the originality should be scrutinized.

Issues

1. Whether it is in accordance with Article 2(a) of the Directive 2001/29/ES to define “works” by its unique and distinguished visual effect from an aesthetic point of view.
2. How design rights interact with copyright law.

Judgment

¹⁷² Anon., 2015. *Karen Millen Fashions Ltd v. Dunnes Stores, Dunnes Stores (Limerick) Ltd: Clarifying the Assessment of Individual Character in EU Designs*, s.l.: fieldfisher.

¹⁷³ Nina O'Sullivan (King & Wood Mallesons SJ Berwin, L., 2014. *Karen Millen v Dunnes Stores: CJEU clarifies ‘individual character’ requirement for Community designs*, s.l.: Journal of Intellectual Property Law and Practice..

In this case the CJEU said that the term “work” should be interpreted uniformly in the whole EU. The EU law sets two cumulative conditions for a work to be copyrighted; the object has to be original in the sense of the author’s own intellectual creation and the elements of the work have to be an expression of that creation. Also, the object needs to be identifiable precisely and objectively.¹⁷⁴

5. Doceram GmbH v. CeramTec GmbH (European Union, 2018)

Facts

Doceram owned registered Community designs for ceramic welding-centering pins used in industrial processes. CeramTec challenged the validity of those designs, arguing that their appearance was dictated entirely by technical function rather than aesthetic considerations. Under European design law, features solely determined by technical function are excluded from design protection.

Issues

1. How to determine whether a design feature is solely dictated by technical function.
2. Whether the existence of alternative designs is decisive.
3. Whether the registered designs were valid.

Judgment

The Court of Justice established that courts must objectively assess all relevant circumstances to determine whether technical function exclusively dictated the design features. The mere existence of alternative designs was not conclusive. If technical considerations alone determined the appearance, design protection could not be granted. The judgment clarified a key limitation on industrial design rights and remains a leading precedent regarding the distinction between functional and aesthetic design features under international design protection principles.

CONCLUSION

¹⁷⁴ Anon., 2019. *Judgement in the case Cofemel v. G-Star*, s.l.: IPI.

The industrial design protection plays a vital role in today's modern and developed economy by safeguarding the visual and aesthetics with different features of the product that has the strong influence over the customers and consumers choice and their flexibility. Industrial design is one the most important parts of any business. This helps the business to grow as it relies on the unique design to differentiate their products and to make an influence on the consumer. The right for the industrial design is provided by an essential legal framework which helps to maintain the creativity, investment and commercial success. By granting these exclusive rights under the statues to both the designers and to the business this helps to promote the design protection, originality work, preventing from unauthorized copying and unfair competition.

The study highlights the key points of the industrial design protection from both aspects i.e. economy innovations as well as legal recognition that helps the brands to strengthen their brand value, encourages entrepreneurship and contributes to overall growth. At international level there are some agreements or instruments such as the Paris Convention, The TRIPS Agreement and the Hague Agreement to establish the common standards and promote greater harmonization of design laws across countries. The Designs Act, 2000 in India provides a comprehensive legal framework for protecting registered designs and supporting innovation across various industries.

There is the rapid growth in the economy with the advancements and the rapid development in all the fields especially in the technologies and digital technologies and AI and the new challenges is seen in the global market to protect the design rights. The concerns relating to the design piracy, cross border infringement and ownership of AI generated designs. At the same time, entrepreneurs focus on the rise of sustainability innovation that highlights the balanced legal framework that is needed to safeguard the designers' rights while promoting fair competition and technological progress with the public interest.

CHAPTER 5: THE INTERFACE BETWEEN DESIGN RIGHTS, COPYRIGHT AND TRADEMARK LAW

BY IFRA QUAZI

INTRODUCTION

Intellectual property's main motive is to protect the creativity of the human mind, innovation and business identity. Intellectual Property law in India operates through various legal frameworks and statutes in India. Three of the main statutes, which we will discuss in this chapter, are Copyrights Act 1957, Designs Act 2000, and Trademarks Act 1999. These three statutes protect different creative work but frequently create complex legal questions when a single creative work qualifies for protection under more than one regime. For instance a logo may qualify for protection under the Designs Act but when used for branding purpose it may simultaneously function as a trademark under the Trade Marks Act 1999. Similarly a label may be protected as an artistic work under the Copyright Act 1957 while also functioning as a trademark. These overlaps give rise to questions of dual protection, legislative conflict and judicial interpretation.

This chapter evolves how design rights, copyright and trademark law intersect in India. It evaluates the distinct boundaries of each legal framework, highlights where they overlap and conflict, and reviews how courts resolve these friction points. Drawing on landmark Indian cases and relevant international frameworks, the chapter argues that the current legislative structure creates significant uncertainty for rights for holders and calls for greater clarity through judicial and legislative reforms. The biggest issue of this entire topic revolves around monopoly and time duration. Consequently, companies often attempt to exploit the gaps by seeking shelter under one law to compensate for another, such as claiming a design as a trademark after its statutory protection expires.

CONCEPTUAL FRAMEWORK: DESIGN RIGHTS, COPYRIGHT AND TRADEMARK LAW

The conceptual framework of any project explains its foundational core. To understand the interface between Copyright, Trademark, and Design Rights at a theoretical level, we must align the core objective of these three laws into a single framework.

Before we delve into the interface among these three the important thing is to understand the conceptual foundation and legal framework of each statutes. This section provides a brief overview of copyright Act 1957, designs rights, trademark law and how they operate in India.

1. Copyright Law

The copyright act 1957 is primarily legislation, which governs copyright protection in India. It protects original literary, dramatic, musical, artistic work, cinematograph films, and sound recording from unauthorized use.¹⁷⁵ As it grants the creator full authority of their works even without registration, as they got their absolute right over their work upon creation directly but the registration also helps as prima facie evidence over the court. The copyright protection lasts for the lifetime of the author and 60 years at the beginning of the calendar year following their death in Indian legislation.¹⁷⁶ Its core concept is anchored in 'Originality'. It operates on the reward theory granting creators exclusive rights as an incentive for their labor, effort, and the original expression of their ideas.

The Eastern Book Company v. D.B modak (2007) is a landmark Indian Supreme Court Case. This case rejected the "sweat of the brow" doctrine, where the court held that mere labor and capital do not grant copyright.¹⁷⁷

2. Design Rights

¹⁷⁵ The Copyright Act, 1957, § 13.

¹⁷⁶ The Copyright Act, 1957, § 2(c).

¹⁷⁷ Eastern Book Company v. D.B. Modak, (2008) 1 SCC 1.

The Designs Act 2000 governs the protection of Industrial designs in India. These designs refer to the aesthetic features of shape, configuration, pattern, ornament, or composition of lines or colors applied to any article.¹⁷⁸ Unlike copyright the design right requires the registration on first basis to get the for creator protection over their design with the design registry. It grants protection to the registered designs for 10 years from the date of registration and it is extendable further for 5 years upon Application.¹⁷⁹ Its core concept is anchored in Novelty. It protects the commercial and visual appeal of a product to stimulate and drive industrial innovation.

Bharat Glass Tube Limited v. Gopal Glass Works Limited (2008 INSC 565) is a landmark judgement delivered by the Supreme Court of India on May 1, 2008.¹⁸⁰ This case revolves around the cancellation of an industrial design registration under the Designs Act, 2000, focusing on the criteria of originality and novelty in design applications.

3. Trademark law

The Trademark Act 1999 governs trademark protection in India. A trademark is defined as a mark that can be graphically represented and is capable of distinguishing the goods or services of one person from those of others.¹⁸¹ This mark can be a label, device, brand, heading, name, signature, shape of goods, packaging or combination of colors. Its core concept is in distinctiveness and consumer protection. Rather than focusing on the visual appearance of a product, its primary aim is to ensure that consumers are not deceived and can accurately identify the true origin of a brand.

Trademark protection arises through registration of marks with the trademark registry; the unregistered marks can also receive protection under the common law action of passing off.¹⁸² A registered trademark is protected for 10 years from the date of application and is renewable indefinitely with the payment of renewal fee within the Indian legislation.

The primary origin of trade origin of goods and services is to distinguish them from the competitors. The case of Cadila Healthcare Ltd. v. Cadila Pharmaceuticals Ltd. (2001) addresses issues of trademark infringement and passing off involving two pharmaceutical companies that

¹⁷⁸ The Designs Act, 2000, § 2(d).

¹⁷⁹ The Designs Act, 2000, § 11.

¹⁸⁰ Bharat Glass Tube Limited v. Gopal Glass Works Limited 2008 10 SCC 657.

¹⁸¹ The Trade Marks Act, 1999, § 2(1)(zb).

¹⁸² The Trade Marks Act, 1999, § 27.

produced similarly named medications. This case established that the primary test for trademark infringement is likelihood of confusion among consumers.¹⁸³

THE INTERFACE BETWEEN DESIGN RIGHTS AND COPYRIGHT

The Intersection between Design Rights and Copyright is the most debated boundary in Intellectual Property Law. The main question which arises is whether the artistic work that is initially recognized as industrially applied commercial product will get copyright protection or whether it will lose the protection as copyright once is registrable as design with the registry.

This question directly addresses section 15 of the copyright act which governs the boundary between copyright and industrial design laws in India.¹⁸⁴ A clear idea is that one cannot take the benefit of copyright and design both for one work, The legislature made both the statutes different so that commercial products can't take longer benefit on copyright.

According to section 15(1) if you have registered the design of your product under the 'Designs Act' then the copyright will be terminated on that design. If one does not register the design and uses the design for some factory product or machine more than 50 times, on its 51st use its copyright would be completely terminated. After that anyone can copy the design as one will lose every right over the design.¹⁸⁵

Microfibers inc.v. Girdhar & co (2009) is one of the most important cases of Intellectual property law. This case involves the plaintiff microfibers inc., an American company which produces sofa cover and curtains. On the other hand, the respondent–Girdhar & Co. is an Indian company. The Plaintiff argued that the respondent had copied their original floral and artistic design and printed that in their materials for a low price.¹⁸⁶

The case was filed for copyright infringement. However, the plaintiff had not registered their design under design acts. The respondent in the court contended that the plaintiff had used the

¹⁸³ Cadila Healthcare Ltd . v. Cadila Pharmaceuticals Ltd. (2001) 5 SCC 73.

¹⁸⁴ The Copyright Act, 1957, § 15.

¹⁸⁵ The Copyright Act, 1957, § 15(1).

¹⁸⁶ Microfibers inc.v. Girdhar & co 2009 (40) PTC 519 (Del) (DB).

design in the commercial market more than 50 times without registration so the copyright protection under copyright act was not available.

The court ruled in the favour of the defendant. This case cleared the confusion between copyright act and designs act. The court cleared that pure art and commercial design are two different things and if anyone uses the design commercially more than 50 times than according to section 15(2) of the copyright act 1957 the copyright will be not available. This case is still the leading example of design-copyright balance in Indian legislation.¹⁸⁷

THE INTERFACE BETWEEN TRADEMARK AND COPYRIGHT

The interface between copyright and trademark arises most commonly. Copyright protects original creativity like art, book, music, and trademark protects brand identity of a business like logo, name, slogan. When it comes to logos, characters and brand names, this creates a situation where the same work is protected simultaneously under two different IP regimes.

A design can get protection of both copyright and trademark many times. However, time is the biggest difference between them and this is where their debate emerges.

Copyright protection is available for the creator's lifetime and 60 years after the death. After that the product enters the public domain which means anyone can use it freely without facing any legal consequences.

On the other hand trademarks can be renewed every 10 years and that way it can last forever till the business is running. When the period of copyright of character or logo comes to an end the companies tries to use it as trademark so they can lock it and no one can use it freely,

There is an important rule in Indian Copyright Act under section 45 (1) which directly shows the interface among these two regimes. If any artistic work is getting registered under copyright which can be used in business goods or services then the copyright registrar will demand a NOC from the trademark registry.¹⁸⁸ This is done to check if whatever design is getting copyright is initially not a registered trademark of anyone. This is to prevent the misuse of both the laws.

¹⁸⁷ The Copyright Act, 1957, § 15(2).

¹⁸⁸ The Copyright Act, 1957, § 45(1).

Twentieth Century Fox Film Corporation v Sohail Maklai Entertainment Pvt Ltd, is the most famous and historic Copyright case, where the Bombay High Court held that artistic works used as trademarks retain their copyright protection independently.¹⁸⁹ This case clears that when an artistic expression or creative screenplay gets stolen, copyright law eliminates biasedness to protect the commercial rights of the real creator. For the second instance the case of Tata Sons v. The Green Peace International states that trademark law cannot be used to suppress someone's freedom of speech or parody until there is no confusion among the customers.¹⁹⁰

In short, while copyright prevents creative theft and trademark protects brand identity, courts always ensure both laws serve fair compliance and public interest.

THE INTERFACE BETWEEN DESIGN RIGHTS AND TRADEMARK

The Interface between the Design Rights and Trademark is intellectual property's one of the most interesting topics where the products look and identity meets.

Design rights protect the products' new and unique look while trademark protects the source of the product, means brand identity so that the consumers don't get confused, but when it is about the shape or structure of the product that's where the two laws intersect.

Under the Design Act unique shape and novelty of the product is registered. Under the Trademark Act 1999 there's a rule for shape of goods, where the consumer recognises the brand easily because of the unique shape then it can get the trademark protection.¹⁹¹

If a company registers a design and later claims it as a trademark, it creates confusion before the court over the Act which should be applied to govern it. The biggest issue here is of time just like the designs and copyright. Wherein design rights are limited and granted for 15 years (10 years+5 extension) only, on the other hand Trademarks are unlimited as it can get renewed every ten years and it can last forever.

Companies want to ensure that no one can ever copy their product's shape. Therefore, as soon as their 15 year design protection is about to expire they approach the court claiming this shape has

¹⁸⁹ Twentieth Century Fox Film Corporation vs. Sohail Maklai Entertainment Pvt Ltd, (2010) 44 PTC 647 (bom).

¹⁹⁰ Tata sons Ltd vs. Greenpeace International, (2011) 45 PTC 275 (Del).

¹⁹¹ The Trade Marks Rules, 2017, r. 26(3).

now become theirs and asks to protect it indefinitely. The law seeks to prevent this practice as it creates an unfair monopoly in the market.

The famous case in India—Crocs Inc. USA vs. Liberty Shoes Ltd.(2018), the crocs company filed the case for the unique shape of their clogs. The court clarified that if the design registration is expired, one cannot hold onto that unique shape forever by simply calling it trademark.¹⁹² If this were allowed, the Designs Act would lose all its meaning.

However, courts will only entertain the claim if that shape has evolved beyond a mere design and established rock- solid 'brand identification' in the market.

Another case of Zippo Manufacturing Co. vs. Anil Moolchandani (2013), where Delhi High Court established that if the 3D shape of a product gets secondary meaning it is protected under Trademarks Act, the Court restrained the imitation of Zippo's unique lighter design, solidifying protection for distinctive product configurations.¹⁹³

The main difference between the Design Rights and Trademark is the novelty. Design Rights is granted when the product is new in the market and is unseen, however for trademark novelty is not necessary but the product should differentiate one brand from the others. Under both the laws, if a shape helps a product function, meaning it is functional, like the thread of a screw it will receive neither design nor trademark protection. It can only be patented.

Design protects the aesthetic look of a product temporarily, and a trademark protects its brand origin permanently. The interface happens when the product's shape itself becomes its brand identity. Courts always ensure that companies do not exploit trademark law to create an unfair monopoly after their design protection expires.

CHALLENGES AND CONTEMPORARY DEVELOPMENTS

Understanding contemporary developments and challenges is essential because, in today's digital work, AI and 3D printing have left all the traditional laws far behind.

¹⁹² Crocs Inc USA vs. Liberty Shoes Ltd., & Ors., 2018 SCC OnLine Del 10325.

¹⁹³ Zippo Manufacturing Co. vs. Anil Moolchandani & Ors., 2011 SCC OnLine Del 4380.

The main challenges in-front of this interface are—

- The Threat of 3D printing: Today, anyone can easily download the design of branded products like Gucci sunglasses or an Apple AirPods case online and mass print it at home using a 3D printer. This causes both design and trademark infringement, but tracking down this pirated production inside individual homes is virtually impossible.¹⁹⁴
- The "Shape of Goods" Loopholes: Even Today Companies try to register their product shapes as a trademark after 15 year design protection expires under the Designs Act. It becomes incredibly difficult for courts to draw the line between a shape that truly functions as a brand identity and one being used merely as an excuse to maintain market Monopoly.¹⁹⁵
- Fast Fashion and Unregistered Designs: Brands like Zara and H&M launch new clothing designs every week. Since registration under the Act takes months, these brands skip the process completely. When smaller brands copy their designs, they try to seek shelter under the Copyright Act in court, reviving the exact same legal conflict under section 15(2).¹⁹⁶

Contemporary Development –

- AI generated Designs: AI tools like Midjourney, Chatgpt, and DALL -E are making new furniture, clothing and logos designs. The most significant new development centers around ownership as to who owns an AI created design. This is a critical issue because all intellectual property laws exclusively grant rights to a human creator.¹⁹⁷
- Virtual Fashion and Metaverses: Nowadays people are buying virtual clothes, shoes and accessories for digital avatars, such as Nike's virtual sneakers. Consequently, courts are establishing new legal frameworks to determine if physical world design and trademark rights apply within digital or virtual Metaverses as seen in the landmark Hermès vs. Rothschild case where a US federal court upheld Hermès trademark rights against digital NFT bags.¹⁹⁸

¹⁹⁴ The Designs Act, 2000, § 2(d).

¹⁹⁵ The Trade Marks Act, 1999, § 9 (3).

¹⁹⁶ The Copyright Act, 1957, §15(2).

¹⁹⁷ The Copyright Act, 1957, §2(d).

¹⁹⁸ Hermès International vs. Mason Rothschild, No. 22-CV-384-JSR, 2023 WL 1458126 (S.D.N.Y. Feb. 2, 2023).

- Sustainability and Green Intellectual Property: Courts are becoming increasingly flexible to actively encourage and promote eco- friendly designs. As demonstrated in the landmark Tata sons vs. Green peace case, if a registered design or trademark is utilised for public interest, environmental awareness, criticism or parody, the judiciary is rejecting the aggressive monopoly claims filed by corporations.¹⁹⁹

In short, Modern challenges like AI, 3D printing, and the Metaverses have further complicated the overlap between IP laws. Instead of relying solely on outdated rules the law must adapt to these new digital technologies to maintain a balance between creators and consumers.

CONCLUSION

The Interface between Copyright, Trademark, and Design Rights within Intellectual Property Rights clarifies that despite being distinct legal frameworks, they are deeply interconnected. The greatest challenge before any country's legal system is to protect a creator's creativity, brand identity and aesthetic look of a product in a manner that prevents any single corporation from establishing an unfair market monopoly.

Indian judiciary took the initiative for resolving and to bring an equilibrium into the interface of these three through different landmark judgements.

While in international perspectives where the Separability Test of United States and Cumulative Approach of European Union work differently, The India has adopted a strict balanced approach, the contemporary developments like artificial intelligence, 3D printing and virtual fashion in metaverse have created a new crises for this entire interface. When an AI designs a complete new pattern or an individual replicates a branded item via 3D printer at home, traditional physical world law begin to fail.

Atlast, the laws should be flexible with the changing times. The true purpose of copyright, trademark and design laws, will only be fulfilled when the legal system prevents a single creator from monopolising rights to the extent that it shuts the door on new inventors. For a healthy

¹⁹⁹ Tata sons Ltd vs. Greenpeace International, (2011) 45 PTC 275 (Del).

economy, it is imperative to protect the rights of creators while simultaneously maintaining a fair, competitive, and free market in the public interest.

Today, India urgently needs a unified intellectual property code to define clear cut boundaries between Copyright, Trademark, and Design Rights. Currently, startups and creators must navigate three separate statutes ,which creates massive confusion and inflated litigation costs, forcing small creators to abandon legal protection altogether. A single comprehensive IP framework would simplify the system, lower court burdens, and foster a safe, innovative environment for startups.

CHAPTER 6: DESIGN PROTECTION IN FASHION, LUXURY GOODS, AND LIFESTYLE INDUSTRIES

BY DIYA SINGH

INTRODUCTION

Why does Indian law struggle to protect the one thing that gives fashion and luxury products their commercial value, their look? When in reality the print on a saree is rarely incidental to the product rather it *is* the product. Today, the legal framework available to protect these features in India remains time-lagged, and uncertain, leaving designers and luxury houses to navigate an overlapping and contradictory set of statutory protections.

This problem is more commonly faced by fashion and lifestyle industries, where the general business is driven by change in trends and styles rather than original or more like some new ideas. While the lifespan of a fashion item, from an economic point of view, can be as little as one season, the legal tools available to protect such an object, most notably the Designs Act 2000,²⁰⁰ have been developed based on an older industrial paradigm. To understand the gravity we must understand that India possesses one of the richest design and craft heritages in the world, be it the hand block prints from the early times or the embroidery traditions that have sustained livelihood for generations. This is where the paradox comes into effect, a country such as India which is rich in patterns, textures, and art, is the one with an ill-equipped legal framework, which is inadequate at the speed the industry demands.

Building on that, we will now discuss Design Protection in Fashion, Luxury, and Lifestyle Industries from an Indian perspective spanning across the Designs Act of 2000²⁰¹ and its much-debated relationship with copyright under Section 15(2) of the Copyright Act of 1957.²⁰²

²⁰⁰ The Designs Act, 2000 (Act 16 of 2000).

²⁰¹ The Designs Act, 2000 (Act 16 of 2000).

²⁰² The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

Following which the chapter sheds light on how the frameworks in the United Kingdom, the United States and the European Union address the same underlying tension, and will then turn to the proposed 2026 reform to India's design law regime.

Finally, in this chapter, the analysis is linked to the structure of the book at large, since design rights do not exist in a vacuum, but rather coexist with geographical indications and trade secrets, creating the mosaic of legal protection for the country's creative and luxury industry.

THE STATUTORY FOUNDATIONS OF DESIGN PROTECTION IN FASHION

The starting point for any analysis of design protection in India is the statutory definition of "design" itself. Section 2(d) of the Designs Act, 2000 provides that "design" means "only the features of shape, configuration, pattern, ornament or composition of lines or colours applied to any article," whether two-dimensional or three-dimensional, by any industrial process, and judged solely by the eye.²⁰³ It is interesting to note that this definition deliberately excludes features that are there purely for the product to function, as well as trademarks, property marks, or artistic works as defined under the Copyright Act, 1957.²⁰⁴ For the fashion and luxury sector, this means that what is protected is not the garment, accessory, or product itself, but the *visual identity* applied to it, the cut of a sleeve, the print on a fabric, or the sole on a shoe.

It is important to note that the protection under the Act is not automatic, instead it flows from registration. Section 4 of the Act clearly states the grounds on which registration may be refused, which are listed as follows, the design must be new or original, must not have been disclosed to the public anywhere in India or elsewhere prior to the filing date, and must be significantly distinguishable from known designs.²⁰⁵ Once the registration is done, Section 11 confers an initial protection of ten years, which is extendable by a further five years upon an application, giving maximum exclusive rights of fifteen years over the registered design.²⁰⁶ Then section 22 sets out the means by which this is enforced, namely, that no person may fraudulently or

²⁰³ The Designs Act, 2000 (Act 16 of 2000), s. 2(d).

²⁰⁴ The Copyright Act, 1957 (Act 14 of 1957).

²⁰⁵ The Designs Act, 2000 (Act 16 of 2000), s. 4.

²⁰⁶ The Designs Act, 2000 (Act 16 of 2000), s. 11.

obviously imitate a registered design without the authorisation of the registered proprietor, with remedies being sought for infringement, including damages and injunctions.²⁰⁷ In totality, these sections establish a form of registration-based monopoly on visual design for a limited period of time, as will be shown through the remainder of this chapter.

A useful theoretical lens for understanding why design protection in fashion takes the particular shape it does is the “piracy paradox” articulated by Raustiala and Sprigman.²⁰⁸ Their thesis observes that the fashion industry imitates design a lot and does not really enforce Intellectual Property laws, yet it keeps innovating, and maybe even faster than before. That’s strange, because IP Protection is usually justified by the idea that people only create new things if they know it won’t get copied. This paradox provides a useful frame for evaluating whether stronger design protection would, in fact, serve the interests of the Indian fashion and luxury sector, or whether the existing gaps perform an unacknowledged economic function.

Finally, any evaluation of the Indian model will need comparisons with other models. The European Union uses a dual system, Unregistered Community Design with automatic but limited protection, and Registered Community Design with protection available for 25 years after registration.²⁰⁹ The United States, on the other hand, uses the principle of the “useful article,” a doctrine under which a design cannot receive copyright protection if it cannot be mentally or physically separated from the utilitarian function of the product.²¹⁰ These two models examined in greater depth further, represent markedly different policy responses to the same underlying problem that the Indian framework, outlined above, attempts to address through registration alone.

THE STATUTORY CONFLICT BETWEEN REGISTRATION AND COPYRIGHT IN INDIAN FASHION LAW

A. Issues with Registration

²⁰⁷ The Designs Act, 2000 (Act 16 of 2000), s. 22.

²⁰⁸ Kal Raustiala and Christopher Sprigman, "The Piracy Paradox: Innovation and Intellectual Property in Fashion Design" 92 Virginia Law Review 1687 (2006).

²⁰⁹ Council Regulation (EC) No. 6/2002 on Community Designs (2002).

²¹⁰ The Copyright Act, 1976 (US), s. 101.

The Designs Act of 2000,²¹¹ is based on the idea that a design should be registered before it is commercially used in order to receive legal protection. However, when the complete picture is taken into account, it does not sit well for the Indian Fashion Industry. So is the case because in India, registering a design can even take more than a year because of the filing, examination and publication process. On the other hand, fashion brands launch two to four collections every year, now each collection has designs that remain popular only for a short time, that is to say their shelf life is shorter. By the time a design is finally registered, it may have run its course commercially, been reproduced by everybody else or gone out of season. As a result, this long registration process discourages from applying for design protection in the first place.

B. The Copyright–Design Overlap: Section 15(2) and Its Consequences

Where a designer does not register a design under the Designs Act, the question arises whether the design can instead claim protection as an “artistic work”²¹² under the Copyright Act, 1957. Section 15(2) of that Act answers this in the negative, in a manner of considerable consequence for the fashion industry, copyright in a Design eligible for registration under the Designs Act shall cease to subsist as soon as the articles bearing the design are made more than fifty times by an industrial process by, or with the license of, the copyright owner.

Now what this kind of provision does is, it forces designers to make a choice. They can either register their designs under the Designs Act and receive temporary legal protection, or they have to choose to not register them. Which in itself is a gamble because if they do not register the design and later use the design commercially, their copyright protection will eventually end.

This interpretation was explained by the Delhi High Court in the case of *Microfibres Inc v Girdhar & Co*,²¹³ where the honourable Court held that when a design is used on a product through an industrial process and is reproduced beyond the limit set under the Section 15(2)²¹⁴, then the designer cannot claim design protection any longer, even if the design was never registered under the Designs Act. The Court reasoned that the law draws a clear distinction between artistic works and commercial designs. While copyright grants long-term protection to genuine artistic creations, the designs that are made primarily for commercial or industrial use

²¹¹ The Designs Act, 2000 (Act 16 of 2000).

²¹² The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

²¹³ *Microfibres Inc. v. Girdhar & Co. & Anr.*, 2009 (40) PTC 519.

²¹⁴ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

cannot continue to enjoy the same protection once the statutory limit under Section 15(2) is crossed.

The impact of this legal position on the fashion industry became clear in *Ritika Pvt Ltd v Biba Apparels Pvt Ltd*,²¹⁵. In this case, the plaintiff claimed that Biba had copied its dress designs. However this copyright infringement claim was dismissed by the Court, because the dresses had been produced on large commercial sale, well beyond the mandated fifty-copy limit under Section 15(2), the court also clarified that the designs were not registered under the Designs Act and thereby were not protected under the Copyright Act. Since garments are naturally manufactured in large quantities through industrial processes, most fashion designs are likely to cross the statutory threshold set out in Section 15(2)²¹⁶ even before any lawsuit is filed, leaving designers without copyright protection. This clearly highlights the dilemma faced by fashion brands in India.

However it becomes important to note that this strict application of Section 15(2)²¹⁷ has not gone unchallenged. In a 2024 dispute, the Delhi High Court²¹⁸ distinguished the decision in *Ritika Pvt Ltd v Biba Apparels Pvt Ltd*, by noting that that the garments involved therein were couture pieces featuring a unique sculptural technique. Unlike mass-produced garments, these pieces were handmade and produced in very limited quantities. Since the fifty-article threshold under Section 15(2) had not been met,²¹⁹ it allowed the plaintiff to continue claiming copyright protection. This judgement indicates that the distinction between industrial mass production and handcrafted, limited-edition fashion can be legally significant. As a result, while most commercially produced fashion designs may fall outside copyright protection, high-end couture created in small quantities may still qualify for protection under copyright law.

A significant development came with the Supreme Court judgment of 2025 in *Cryogas Equipment Pvt Ltd v Inox India Ltd*,²²⁰ Although it is a case outside the fashion industry, it may have a bearing on the issues discussed above. It was found by the Court that dismissing a case based purely on Section 15(2),²²¹ without going further to ascertain the qualification for

²¹⁵ *Ritika Pvt. Ltd. v. Biba Apparels Pvt. Ltd.*, 2016 SCC OnLine Del 1827.

²¹⁶ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

²¹⁷ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

²¹⁸ *M/S Reflect Sculpt Pvt. Ltd. & Anr. v. Abdus Salam Khan*, CS(COMM) 278/2024.

²¹⁹ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

²²⁰ *Cryogas Equipment Pvt. Ltd. v. Inox India Ltd. & Ors.*, 2025 INSC 483.

²²¹ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

registration and its application to the particular industry, is too early an action. In light of the above and together with *Ritika*, this development seems to mark a departure from the previous “black-and-white” approach towards one of fact-finding, which will be discussed further in this chapter.

C. The Inadequacy of Design as a Categorical Concept and The Role Of Trade Dress

A separate strand of litigation reveals that Indian courts have, in practice, supplemented the Designs Act framework with trade mark and trade dress reasoning when adjudicating disputes over fashion and luxury products, suggesting that “design,” as statutorily defined, may be too narrow a category to capture the full range of features that consumers and courts treat as source-identifying.

The Delhi High Court’s decision in *Christian Louboutin SAS v Mr Pawan Kumar & Ors*,²²² The Delhi High Court demonstrates how trademark law can protect fashion designs even where design law may not. The Court in this case recognised Christian Louboutin’s distinctive red sole as a well-known trademark and subsequently granted an injunction and damages against its unauthorised use. Again it is important to note that this protection was not based on the registration under the Designs Act, but rather on the distinctiveness and reputation that the red sole had acquired in the marketplace.

The Court adopted similar reasoning in *Louis Vuitton Malletier v Atul Jaggi & Ors*,²²³ where it restrained the sale of counterfeit luxury goods on the grounds of trademark infringement and the common law remedy of passing off, instead of design infringement. Ironically, the copied features – monogram patterns, hardware and the overall product configuration, are exactly the types of visual features that fall within the definition of a “design” under Section 2(d) of the Designs Act.²²⁴ Taken together, these cases demonstrate that trademark law has emerged as a more practical and effective means of protecting valuable fashion designs than the Designs Act.

However it is to be understood that this is not a unidirectional way and in some cases, the Designs Act has proved to be just as effective. In *Anita Dongre v Rishi Vij & Ors*,²²⁵ The Delhi

²²² *Christian Louboutin SAS v. Mr. Pawan Kumar & Ors.*, 2017 SCC OnLine Del 12173.

²²³ *Louis Vuitton Malletier v. Atul Jaggi & Ors.*, CS(OS) 1419/2009.

²²⁴ The Designs Act, 2000 (Act 16 of 2000), s. 2(d).

²²⁵ *House of Anita Dongre Pvt. Ltd. v. Rishi Vij & Ors.*, CS(COMM) 64/2020.

High Court granted an *ex parte ad interim injunction* restraining the manufacture and sale of garments based on the claimant's registered designs. This demonstrated that when designers obtain registration, then the Designs Act provides a relatively straightforward and effective route for enforcing their rights.

When read together, these judgements reveal a certain divide. Registered designs receive strong protection under the Designs Act, while the commercially valuable but unregistered designs' features often have to rely on trademark law and the common law remedy of passing off for protection.

COMPARATIVE PERSPECTIVES

The doctrinal conflicts within the Indian legal framework, the registration lag problem, the rigidity of Section 15(2),²²⁶ and the need to use trade mark law to address deficiencies in the Designs Act are not peculiar to India. This is why the European Union and the United States each have their own separate approaches to resolving this common predicament, that ensures that the appearance of products manufactured and marketed on a large scale is adequately protected, while avoiding both excessive copyright protection and design laws that offer practical value. Comparing these two systems will provide us with a comparative perspective from which the Indian legal framework may be evaluated.

A. The European Union Approach – Dual Track Protection System and the Expansion of Cofemel Doctrine.

The European Union addresses the registration-lag problem directly through a dual-track system under Council Regulation (EC) No 6/2002.²²⁷ The Unregistered Community Design confers automatic protection for three years from the date a design is first made available to the public within the Union, requiring no registration formality whatsoever, a direct response to the fact that much of fashion's commercial value is realised within a single season. The Registered Community Design, by contrast, offers up to twenty-five years of protection, but only upon fashion registration. This system makes it possible for a single design to be automatically

²²⁶ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

²²⁷ Council Regulation (EC) No. 6/2002 on Community Designs (2002).

protected without payment of any kind for the probable lifetime of its commercial viability, while reserving registration for those designs that have a long life ahead of them, something that is completely lacking in India.

Therefore, we can say that the European Union has undertaken a broader approach to protecting fashion designs. This was further strengthened by the decision of the Court of Justice of the European Union in *Cofemel – Sociedade de Vestuário SA v G-Star Raw CV*.²²⁸ In its decision, the honourable court rejected the argument that clothing designs should not receive copyright protection, merely because they serve industrial purposes. Instead what the court stated was, that the key question is whether the design is the author's "own intellectual creation". By author's "own intellectual creation", the court of law means that whether it reflects the author's free and creative choices rather than being dictated by the technical or functional requirements. This decree makes it clear that a clothing design in the European Union can receive protection under both copyright law and design law at the same time.

Cofemel therefore permits copyright and design protection to coexist over the same garment, without the kind of either/or threshold that Section 15(2) imposes in India.²²⁹ The contrast here is thought provoking, the European Union focuses on the originality of the design rather than the number of products manufactured, whereas Indian law forces designers to choose between the two once a design is commercially reproduced beyond a certain limit.

Under Indian law, Section 15(2) of the Copyright Act, 1957 provides that copyright in a design ceases once the article bearing that design has been reproduced more than fifty times through an industrial process, unless the design has been registered. So to this, the EU model discussed above tends to be a possible alternative providing a long term, formal protection.

In totality, the European Union advocates that the mass production does not automatically take away copyright protection if the design is original.

B. United States – Useful Article Doctrine and Its Erosion Through Trade Dress

As opposed to the above two countries, the United States adopted the "useful article" doctrine wherein copyright will only cover design elements that can be identified separately from, and

²²⁸ *Cofemel – Sociedade de Vestuário SA v. G-Star Raw CV* (2019) Case C-683/17 (CJEU).

²²⁹ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

exist independently of the utilitarian aspects of the article to which they are applied.²³⁰ This approach was explained by the Supreme Court of the United States in *Star Athletica LLC v Varsity Brands Inc.*²³¹ The Supreme Court refined this approach in the context of cheerleading uniform designs, holding that surface decorations such as stripes, chevrons and colour blocking could be ‘conceptually’ separated from the uniform’s utilitarian function and were therefore eligible for copyright protection. However, the uniform itself, as a useful article, could not be protected. Although this decision did expand copyright protection to some extent, clothing design as a whole continues to receive relatively limited copyright protection in the United States, making the American approach more restrictive than that of the European Union’s post *Cofemel*.

Notably, this gap left by the restrictive copyright position has been filled through ‘trade dress’ protection. In *Christian Louboutin SAS v Yves Saint Laurent America Holding Inc.*,²³² The United States Court of Appeals for the Second Circuit, held that a single colour used on a specific part of a product can function as a trademark if consumers associate it with a particular brand. Applying this principle, the Court recognised Christian Louboutin’s distinctive red lacquered sole as a source identifier, independent of the overall design of the shoe.

Similarly, in *Hermès International v Emperia Inc.*,²³³ Hermès relied on trade dress protection over the Birkin bag’s overall configuration, its trapezoidal silhouette, the dimpled triangular shoe’s shape, and distinctive lock, rather than any design registration, to restrain the sale of imitation bags.

C. Comparative Synthesis of Design Protection Models

Three distinct strategies emerge from this comparison. One can see that the timing question is addressed structurally by the EU, as there is an automatically existing and unregistered right, which is calculated taking into account the economics of the fashion products’ life-cycle.

The European Union addresses this issue through a broader framework that bases copyright protection primarily on originality. On the other hand, the United States adopts a comparatively

²³⁰ The Copyright Act, 1976 (US), s. 101.

²³¹ *Star Athletica, LLC v. Varsity Brands, Inc.*, 580 US 405 (2017).

²³² *Christian Louboutin S.A. v. Yves Saint Laurent America Holding, Inc.*, 696 F.3d 206 (2d Cir. 2012).

²³³ *Hermès International v. Emperia, Inc. et al.*, No. 14-CV-03522 (CD Cal 2014).

narrower approach to copyright, under which fashion designs rarely qualify for protection, which is exactly why trade dress law has evolved to fill this gap.

India, however, does not enjoy either of the two advantages. Unlike the European Union, it does not provide automatic short-term protection for the unreserved designs. At the same time, unlike the United States, India's trade dress jurisprudence remains relatively underdeveloped.

The following section covers how these aforementioned shortcomings might be addressed through legal reform.

REFORMING INDIA'S DESIGN PROTECTION FRAMEWORK

The discussion so far demonstrates that India's design protection framework is structurally ill-equipped to meet the needs of the modern fashion industry because a system built around registration may work well for products with long commercial lives, but it is in fact far less suited to an industry where collections change every few months and where designs are often copied before the registration process is complete.

Analysing these shortcomings, the Department for Promotion of Industry and Internal Trade²³⁴ released a Concept Note in January 2026 proposing significant reforms to the Designs Act, 2000.²³⁵ Many of these proposals respond directly to the concerns that have emerged from the judicial decisions and comparative analysis that were discussed above.

A. Time-Bound Copyright Protection for Unregistered Designs

The first, and arguably the most significant, of these proposals is the introduction of time-bound copyright protection for unregistered designs. Under the proposed framework, designs that are capable of registration but remain unregistered under Designs Act.²³⁶ would receive protection up to 15 years.²³⁷ This amendment proposal addresses the problem arising from the decision in *Ritika v Biba*,²³⁸ wherein copyright protection in the non-registered garment design was lost once

²³⁴ Department for Promotion of Industry and Internal Trade, "Concept Note on Proposed Amendments to the Designs Act, 2000" Jan. 23, 2026, available at: <https://dpiit.gov.in> (last visited on June 20, 2026).

²³⁵ The Designs Act, 2000 (Act 16 of 2000).

²³⁶ The Designs Act, 2000 (Act 16 of 2000).

²³⁷ Department for Promotion of Industry and Internal Trade, "Concept Note on Proposed Amendments to the Designs Act, 2000" Jan. 23, 2026, available at: <https://dpiit.gov.in> (last visited on June 20, 2026).

²³⁸ *Ritika Pvt. Ltd. v. Biba Apparels Pvt. Ltd.*, 2016 SCC OnLine Del 1827.

the Section 15(2) criteria were fulfilled.²³⁹ The proposed amendment by Concept Note replaces this all-or-nothing approach with a more balanced one. Herein, instead of losing protection altogether, designers would continue to enjoy the limited copyright protection for a fixed period. While registration would still remain the preferred option for designs with a longer commercial life.

It is important to note that whether fifteen years is the appropriate duration is open to debate. What is more significant here is the shift in the approach. Rather than treating commercial exploitation as the end of copyright protection, the proposal recognises that unregistered designs would still deserve a limited period of legal protection.

B. Grace Period and Deferred Publication

Another one of such proposals seeks to tackle the long-standing problem of delays in design registration, which often forces fashion designers to launch their products before completing their registration process. The Concept Note proposes a twelve-month grace period, allowing designers to apply for registration up to one year after any prior public disclosure without losing novelty. It also introduced the deferred publication option that would allow the design to remain confidential for up to thirty months from the filing or priority date.²⁴⁰

Together, these reforms acknowledge a commercial reality that the existing law largely ignores. Fashion brands, particularly smaller labels and independent designers, often have little choice but to release their collections before completing the registration process.

By giving designers more flexibility, these proposals make registration a more practical option rather than an unrealistic prerequisite.

C. Statutory Damages and International Harmonisation

Adding on, the Concept Note also recognises that stronger rights mean little without effective remedies. To improve this enforcement, it proposes introducing statutory damages, with compensation up to fifty lakh for a first instance of infringement. It even recommends India's accession to the Hague Agreement Concerning the International Deposit of Industrial Designs,

²³⁹ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

²⁴⁰ Department for Promotion of Industry and Internal Trade, "Concept Note on Proposed Amendments to the Designs Act, 2000" Jan. 23, 2026, available at: <https://dpiit.gov.in> (last visited on June 20, 2026).

bringing India's registration system closer to international standards and making it easier for Indian designers to protect their designs abroad.

The former will help enforce the existing mechanism under which the holder of a registered design can get damages, as happened in the case of *Anita Dongre*²⁴¹ The latter will enable Indian fashion houses to obtain design protection in several countries with one application, directly relevant to a sector in which Indian-origin luxury products increasingly compete in EU and US markets.

D. Recommendations for Strengthening The Proposed Reforms

Building on the above, three concrete recommendations follow. First, the suggested limited copyright period needs to be considered with regard to the real cycles of fashion products, a period of fifteen years, while an enhancement to the full copyright extinction might still be too lengthy, and a more flexible approach based on the differentiation between couture and ready-to-wear clothing is what may better mirror the Delhi High Court distinction in 2024.²⁴² Second, the Design Registry might take into account a fast-track examination procedure for the filing of apparel and accessory designs, since the general twelve-month period would not make much sense when the problems with the delay in the design examination procedure are not addressed. Third, the accession to the Hague System needs to be accompanied by raising awareness about the new system among small- and medium-sized fashion businesses, who stand to gain the most from it.

CONCLUSION

This chapter started off with a question, why Indian law finds itself unable to provide adequate protection of what gives fashion and luxury goods their marketable appeal, their look? The answer to this, as is evident from above, does not lie in the lack of an adequate legal system but rather in its inability to adjust to the changes that have taken place since it was first devised based on certain underlying assumptions.

²⁴¹ House of Anita Dongre Pvt. Ltd. v. Rishi Vij & Ors., CS(COMM) 64/2020.

²⁴² M/S Reflect Sculpt Pvt. Ltd. & Anr. v. Abdus Salam Khan, CS(COMM) 278/2024 (Del HC).

The Designs Act 2000,²⁴³ provides a registration-based and limited-term monopoly suited to the traditional industrial model, while Section 15(2) of the Copyright Act,²⁴⁴ withdraws copyright protection once a design is commercially reproduced beyond the prescribed threshold. Taken together, these provisions have shaped judicial outcomes in cases such as *Louboutin*²⁴⁵ and *Louis Vuitton*,²⁴⁶ leaving only narrow exceptions for couture production, as seen in the Delhi High Court decision²⁴⁷ distinguishing *Ritika*.²⁴⁸ The comparative analysis undertaken in this chapter, however, shows that this outcome is far from inevitable. The European Union's dual-track system, particularly following *Cofemel*'s originality-based test,²⁴⁹ and the United States' trade dress jurisprudence, reflect deliberate policy choices about how copyright, design, and trademark protection should interact. India, by contrast, has yet to articulate such a coherent policy vision

It is against this backdrop that the 2026 Concept Note assumes particular significance. Rather than proposing isolated reform, the 2026 Concept Note brings together a series of measures that responds directly to many of the structural concerns identified throughout this chapter, including the introduction of limited copyright terms for unregistered designs, a grace period, deferred publication, and India's accession to the Hague System.

No matter whether they will be adopted as suggested, or perhaps modified, the point here is that there is an understanding that the field of design protection needs to evolve along with the field it serves, and not simply stay put.

²⁴³ The Designs Act, 2000 (Act 16 of 2000).

²⁴⁴ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2).

²⁴⁵ *Christian Louboutin S.A. v. Yves Saint Laurent America Holding, Inc.*, 696 F.3d 206 (2d Cir. 2012).

²⁴⁶ *Louis Vuitton Malletier v. Atul Jaggi & Ors.*, CS(OS) 1419/2009.

²⁴⁷ *M/S Reflect Sculpt Pvt. Ltd. & Anr. v. Abdus Salam Khan*, CS(COMM) 278/2024.

²⁴⁸ *Ritika Pvt. Ltd. v. Biba Apparels Pvt. Ltd.*, 2016 SCC OnLine Del 1827.

²⁴⁹ *Cofemel – Sociedade de Vestuário SA v. G-Star Raw CV* (2019) Case C-683/17 (CJEU).

CHAPTER 7: PRODUCT DESIGN, CONSUMER BEHAVIOUR, AND MARKET COMPETITION

BY ZEENAT ANJUM AND ISHAN AHMED

INTRODUCTION

As markets have become more design-driven, however, Industrial designs have assumed a much greater role in commercial competition and consumer decision-making.²⁵⁰ For much of the twentieth century, industrial designs were marginalized by legal scholars, often viewed as the weaker sibling of patents and copyrights.²⁵¹ An industrial design was generally understood as merely the coating applied to an otherwise functional article that is a superficial addition intended to make a utilitarian object slightly more acceptable to the consumer, rather than a core driver of economic value.²⁵² However, contemporary market dynamics have fundamentally disrupted this traditional perception. In the advance market trends, the commercial producer is the driving force for any commercial exploitation of the product. The design of any particular product serves as the premier check in case of market products which are competing on the basis of technological advancements.²⁵³ It provides the choice of brand authentication and trust, communicates the functionality and branding aspects of any particular products, proposing to securely maintain the pre dominance in the commercial market.²⁵⁴ From the proprietary curvature of modern consumer electronics to the highly distinctive contours of automotive spare parts, design has evolved into an indispensable economic tool.

The commercial value of product design has made the interaction between intellectual property law and competition law increasingly significant. Although intellectual property rights provide

²⁵⁰ V. K. Ahuja, *Law Relating to Intellectual Property Rights* 412 (LexisNexis, New Delhi, 3rd edition., 2017)

²⁵¹ Peter Drahos, *Information Feudalism* 112 (Earthscan, London, 2002)

²⁵² Eashan Ghosh, *The Finished Article: Essays on Indian Designs Law* 45 (Thomson Reuters, New Delhi, 2022)

²⁵³ Joseph Drexler, *Research Handbook on Intellectual Property and Competition Law* 112 (Edward Elgar Publishing, Cheltenham, 2008)

²⁵⁴ Ariel Ezrachi, *EU Competition Law: An Analytical Guide* 185 (Hart Publishing, Oxford, 6th edition., 2018)

creators with a limited legal monopoly, competition law ensures that these rights are not exercised in ways that unfairly restrict competition or harm consumers.²⁵⁵ The purpose for enacting the Design act, 2000 was providing the incentive option to the creative work and innovation through granting the inventor or author a time limited, conclusive statutory remedy while exploiting the designs subject matter commercially.²⁵⁶ The intellectual labour skill and judgment which has been envisaged to its proprietor require the novelty and originality aspects to satisfy the commercial spectrum. As per utilitarian property theory, it may be presumed that the subject matter of a particular design possesses significant commercial weightage which determines the protection against unauthorised exploitation.²⁵⁷ The Designs Act, 2000, was enacted by the Indian Parliament to incentivize innovation and creativity by granting creators a time-bound, exclusive statutory right to commercially exploit their original aesthetic designs. This statutory monopoly is an intentional legislative construct. It is designed to reward the intellectual labour, financial investment, and artistic risk required to bring novel aesthetics to the marketplace. The underlying rationale, rooted in utilitarian property theory, operates on the presumption that good design possesses intrinsic commercial value that deserves robust state protection against unauthorized duplication.

Conversely, the Competition Act, 2002, operates on a distinctly different institutional logic. Originating from the recommendations of the Raghavan Committee, which sought to transition India from a command-and-control economy to a modern free market, the Competition Act serves as the economic constitution of the nation.²⁵⁸ It seeks to prevent the abuse of dominant market positions, dismantle anti-competitive agreements, and ensure that monopolies, even those legally acquired through intellectual property offices, are not utilized to the detriment of market equity, independent innovation, and consumer welfare.²⁵⁹ On one hand intellectual property right regime aims to protect innovation by providing the statutory right via restricting others, on the other hand the competition law ascertains the predominance of innovation through a free, open and competitive market environment.

²⁵⁵ Competition Commission of India v. Steel Authority of India Ltd., (2010) 10 SCC 744

²⁵⁶ The Designs Act, 2000 (Act 16 of 2000)

²⁵⁷ Eashan Ghosh, *The Finished Article: Essays on Indian Designs Law* 56 (Thomson Reuters, New Delhi, 2022)

²⁵⁸ Ministry of Corporate Affairs, Government of India, "Report of the High Level Committee on Competition Policy and Law" (Raghavan Committee Report, 2000)

²⁵⁹ Abir Roy and Jayant Kumar, *Competition Law in India* 142 (Eastern Law House, Kolkata, 2nd edition., 2014)

The relationship between the Designs Act and the Competition Act is not always straightforward. The design act aims to encourage inventiveness to certain new and original designs by providing exclusive propriety rights. However, when those rights are used to restrict market access or prevent effective competition beyond the scope intended by law, concerns arise under competition law.²⁶⁰ Large multinational enterprises increasingly register designs not merely to protect genuine creativity, but to aggressively extend their market power into secondary markets, such as the captive market for proprietary spare parts or repair services.²⁶¹ The same arrangements expand the Intellectual property right ambit much more than the limits decided by my legislature. The evolution under design act, 2000 (design protection) and competition act 2002 by discussing the legislative framework viz. Industrial design, exclusively the curtailing down of functional features from the protection. It has also been discussed how consumer behaviour, expenditure modifications and market trends affect competition law analysis. Also, that competition concerns that has arisen when rights associated with any particular design are used to restrict to aftermarket products. Consequently the chapter evaluates the judicial pronouncements and policy impact which includes consumer protection act 2019, analysing the balanced and equitable connection between Intellectual property right and Competition law.

STATUTORY FRAMEWORK AND THE BOUNDARIES OF THE DESIGNS ACT, 2000

It is significantly important to conceptualize the protection under Design act because to determine the arising of Competition law concerns will be decided by the statutory rights granted under the Design act, TRIPS agreement also favours this arrangement because there is distinction between visual appearance of a design product from the functionality feature. Although the utility expects of its functionality,²⁶² which denotes technological advancement had been

²⁶⁰ Department for Promotion of Industry and Internal Trade (DPIIT), "National Intellectual Property Rights Policy" (Government of India, 2016)

²⁶¹ T. Ramappa, Competition Law in India: Policy, Issues, and Developments 231 (Oxford University Press, New Delhi, 3rd edition, 2014)

²⁶² Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement, 1994, art. 25

protected under Patent act,1970. In India, under the Patent act 1970, the aesthetic appearance is protected under the Design act.²⁶³

SECTION 2 (d) of Design Act, 2000 provides the statutory framework such as "design" as only the features of shape, configuration, pattern, ornament or composition of lines or colours applied to any article by any industrial process. Crucially, the definition is qualified by what it explicitly excludes. The statute mandates that a design does not include any mode or principle of construction or anything which is in substance a mere mechanical device.²⁶⁴ Also, this protection categorically excludes any protection under trademark act 1999 or copyright act 1957 “as subject matter”.²⁶⁵

The purpose for including these strict provisions was the absolute protection of market competition; such absolute protection has been deliberately included to revert authorities from securing an unlawful undue advantage.²⁶⁶ Patent law grants a monopoly for a period of twenty years, after which the functional invention falls into the public domain.²⁶⁷ To obtain a patent, an inventor must satisfy rigorous standards of absolute novelty, inventive step, and industrial applicability. Design law grants a maximum fifteen-year monopoly, but the threshold for originality is significantly lower. If an enterprise were legally permitted to register a purely functional feature under the guise of an aesthetic design, it could bypass the strict examination of the patent office, securing a monopoly over a mechanical utility based merely on its visual presentation.²⁶⁸ It may result in significant damage to technological innovation and restrict the competitors from utilising essential features.

Under the “Doctrine of Election” it has been recognised that overriding the intellectual property protection can ultimately lead into expansion of monopolies.²⁶⁹ In the foundational case of *Microfibres Inc. v. Girdhar and Co.*, the Hon’ble Delhi High Court discussed about co relation

²⁶³ V. K. Ahuja, *Law Relating to Intellectual Property Rights* 415 (LexisNexis, New Delhi, 3rd edition., 2017)

²⁶⁴ The Designs Act, 2000 (Act 16 of 2000) s. 2(d)

²⁶⁵ The Trade Marks Act, 1999 (Act 47 of 1999)

²⁶⁶ Ashish Bharadwaj, Vishwas H. Devaiah, and Indranath Gupta, *Multi-dimensional Approaches Towards New Technology* 89 (Springer, Singapore, 2018)

²⁶⁷ The Patents Act, 1970 (Act 39 of 1970), s. 53

²⁶⁸ Ashish Bharadwaj, Vishwas H. Devaiah, and Indranath Gupta, *Multi-dimensional Approaches Towards New Technology* 95 (Springer, Singapore, 2018)

²⁶⁹ Eashan Ghosh, *The Finished Article: Essays on Indian Designs Law* 112 (Thomson Reuters, New Delhi, 2022)

protection under copyright act, design law²⁷⁰, the Hon'ble court held that *a creator cannot claim overlapping protections to circumvent the statutory limitations of the respective Acts*. Emphasizing legislative intent, the court noted that pursuant to Section 15(2) of the Copyright Act, once an artistic work is applied to an article by an industrial process and reproduced more than fifty times, copyright protection ceases.²⁷¹ The creator must rely exclusively on the Designs Act, preventing the use of lifetime-plus-sixty-years copyright protection to monopolize mass-produced industrial products.

Further solidifying the boundary against functional monopolies is the jurisprudence surrounding purely functional shapes. In *Crocs Inc USA v. Bata India Ltd.*, where the plaintiff instituted an infringement suit against multiple footwear manufacturers of Indian origin, alleging that they have unlawfully copied the registered design of Plaintiff's clogs style footwear. The defendant countered the legality of registration contending that static originality is missing from the subject matter and it has been concluded on functionality. The Hon'ble Delhi High Court while invalidating the design registrations as invalid on the basis of section 2 (d) The court observed that the specific shape of the footwear, including ventilation holes and the back strap, was dictated by the functional requirement of creating a breathable, slip-resistant shoe.²⁷² Granting a monopoly over such requirements would grant a monopoly over the concept of a functional clog, driving competitors out of the market; a classic antitrust concern masquerading as an IP dispute.

The exclusion of functional features from design protection plays an important role in preserving competition. Through practical ascertainment, Section 2 (d) and refusing the design registrations solely on functionality requirements, the IP office ensures that the technical results remain available for public use rather than becoming subject of design rights. Therefore certain features such as the shape of a printer ink cartridge or an automotive interlocking mechanism, which are valid on technological utilitarian compatibility, rather than the visual exposure, determined as outside the design act permissible ambit.²⁷³ Granting a design registration on such shapes effectively grants a monopoly over the device's entire ecosystem. However, few critiques highlight that the initial examination process at the Design Office is occasionally lax, allowing

²⁷⁰ *Microfibres Inc. v. Girdhar and Co.*, 2009 (40) PTC 519 (Del).

²⁷¹ The Copyright Act, 1957 (Act 14 of 1957), s. 15(2)

²⁷² *Crocs Inc. USA v. Bata India Ltd.*, 2019 (78) PTC 1 (Del)

²⁷³ T. Ramappa, *Competition Law in India: Policy, Issues, and Developments* 245 (Oxford University Press, New Delhi, 3rd edition, 2014)

functional elements expertly masked as aesthetic designs to slip through to registration.²⁷⁴ It is within these regulatory blind spots that severe competition law concerns materialize.

ECONOMIC PARADIGMS: CONSUMER PERCEPTION AND MARKET DELINEATION

Competition issues relating to industrial designs cannot be understood solely through the language of statutes. They also depend on how consumers perceive and choose products in the marketplace. Product design often shapes those choices by influencing how consumers associate a product with a particular brand, its quality, or its reputation. As a result, purchasing decisions are not always driven by price or functional features alone. In many markets, the visual appearance of a product creates brand loyalty that affects consumer preferences and, in turn, the competitive dynamics of the market.²⁷⁵

From another perspective, when aesthetics successfully brings about intense brand loyalty, they create what behavioural economists refer to as "inelasticity of demand." Consumers become significantly less sensitive to price increases because they perceive the uniquely designed product as having no viable alternatives.²⁷⁶ A consumer heavily invested in the aesthetic ecosystem of a particular technology brand will not easily switch to a competitor, even if the competitor offers superior technical specifications at a lower price. This psychological lock-in effect, driven significantly by design, is a critical metric in competition law, directly informing the delineation of the "relevant market."

Under Section 2(t) of the Competition Act, 2002, the "relevant product market is defined as:

*“a market comprising all products or services regarded as interchangeable or substitutable by the consumer, by reason of characteristics, prices, and intended use.”*²⁷⁷

²⁷⁴ S. M. Dugar, Guide to Competition Law 674 (LexisNexis, New Delhi, 6th edn., 2016).

²⁷⁵ Avirup Bose, Smriti Parsheera, and Ajay Shah, "Competition Issues in India's Online Economy" SSRN Electronic Journal 12 (2017)

²⁷⁶ Toyota Jidosha Kabushiki Kaisha v. Prius Auto Industries Ltd., (2018) 2 SCC 1

²⁷⁷ The Competition Act, 2002 (Act 12 of 2003), s. 2(t)

The said definition provides a holistic approach of antitrust jurisprudence from the consumers perspective. In *Excel Crop Care Ltd. v. Competition Commission of India*, Hon'ble Supreme Court held that "understanding true market dynamics requires looking beyond technical product classifications to analyse the economic realities of consumer choice."²⁷⁸

The price SSNIP test provides an increase which is significant and non-transferable but narrow in approach, used by the competition commission authorities. There's a burning question before the investigating authorities who are deciding the patent protection to an authentic design, that is whether consumers will be fascinated by a 20-25% price hike in favour of the competitor brand. In case if a significant section of consumers decline to switch, such design shall be ascertained as a distinctive relevant product market.

This economic disparity leads to legal complications centering around market power. This economic reality yields profound legal consequences concerning market power. Section 4 of the Competition Act strictly prohibits the abuse of a dominant position.²⁷⁹ Under Indian law the subject matters. Dominance is lawful although the legislation punishes its misuse. Explanation (a) to Section 4 defines "Dominance as a position of strength enabling an enterprise to operate independently of competitive forces." Section 19(4) mandates the Competition 'Commission of India (CCI) to consider factors like market share, barriers to entry (including IP rights), and consumer dependence when assessing dominance.'²⁸⁰

In case an enterprise gets its design protected, the rights granted under Design act, 2000 will ultimately affect the considered market nomenclature. That the market may be preferably dominated by that particular design which is unique and whose customers refused to switch to the competing brands. Consequently, the company's market position may be strengthened by the multiple subject matter registrations.²⁸¹ When the subject matter qualifies IP regime checks, the companies conduct shall be strictly scrutinised, which ultimately leads into the conflict between right to exclusion and competing failed principles.

²⁷⁸ *Excel Crop Care Ltd. v. Competition Commission of India*, (2017) 8 SCC 47.

²⁷⁹ The Competition Act, 2002 (Act 12 of 2003), s.4

²⁸⁰ The Competition Act, 2002 (Act 12 of 2003), s. 19(4).

²⁸¹ S. M. Dugar, *Guide to Competition Law* 680 (LexisNexis, New Delhi, 6th edn., 2016).

THE ABUSE OF DOMINANCE: AFTERMARKETS AND SECTION 4

The Competition law also provides checks and balances for the Intellectual right regime. Regardless of the fact that the exclusive right has been granted under Design act to its owner, such rights must act in coherence with competition law objectives.

The key provisions are as follows section 3 addresses

Section c provides the arrangement in case of an adverse effect on the market competition, whereas section 4 restricts the dominant position's misuse.

Section 3 prohibits enterprises from entering into agreements concerning production or supply that cause an appreciable adverse effect on competition, encompassing horizontal cartels and restrictive vertical agreements.²⁸² Recognizing that intellectual property inherently requires exclusionary licensing, the legislature introduced Section 3(5) as a safe harbour provision. As per the provision Section 3 shall not constrain the right of any individual to impose reasonable restrictions which are necessary for protecting rights guaranteed under IP legislations Act, 2000.

²⁸³

It includes certain justifiable restrictions such as a legal enforcing process that may lead into unjustified and unrecognisable trade constraints, is complex and herculean. The operative statutory phrase is reasonable conditions. Determining when a permissible enforcement tactic becomes an unreasonable trade restraint is a complex adjudicatory task. However, if the licensor imposes resale price maintenance or prohibits the licensee from challenging the design's validity in court, these conditions exceed the scope of what is necessary to protect the IP. They cross the threshold of reasonableness, become illegal anti-competitive agreements, and lose the protection of Section 3(5).²⁸⁴

While Section 3(5) provides a conditional exemption for agreements, it is entirely silent regarding Section 4, which governs the abuse of dominance. This provision leads into the basic principle that is: "while intellectual property rights may justify restrictive contracts between

²⁸²The Competition Act, 2002 (Act 12 of 2003), s. 3

²⁸³The Competition Act, 2002 (Act 12 of 2003) 3(5)

²⁸⁴ Vikas Kathuria, "Vertical restraints under Indian Competition Law: whither law and economics" 10 Journal of Antitrust Enforcement 194, 201 (2022)

consenting parties, they can never justify an abuse of market dominance that harms consumer welfare.” In *Telefonaktiebolaget LM Ericsson (Publ) v. Competition Commission of India*, the Competition commission of India authority possesses exhaustive jurisdiction for investigating anti-competitive practices under Intellectual property rights domain.²⁸⁵ The behavioural constraints provided by section 4 leads into the design registration which doesn’t fall under the category of immunity.

These Competition law’s technicality also involves the pre dominance of design right in after markets which are considered to be replacement parts and repair services sector which eventually comes into picture after the primary products purchased in market. For Example after buying an automobile from primary sector the consumer later on prefers the aftermarket sector for spare parts maintenance and repairs. The issue arises when commercial manufacturers restrict the secondary market by preventing the small Scale suppliers from manufacturing compatible replacement parts. Such tactics shatter the consumer's choice and increase the cost of repair.²⁸⁶ Substantial restriction arises before original equipment manufacturers, getting every visible spare part design registered. Such restriction has also been implemented over third party manufacturers who are not allowed to manufacture the descriptively similar design in comparison to original design.²⁸⁷

This practice forces the consumer, already locked into the brand due to the initial purchase, into a captive secondary market. The OEM, insulated from independent competition, can impose monopolistic pricing for replacement parts. Under Section 4(2)(a) of the Competition Act, imposing unfair or discriminatory pricing constitutes a direct abuse of dominance.²⁸⁸ Additionally Section 4(2)(d) provides that there can be no connection asserted between the supplementary obligations which have no connection with the original contract subject matter.

As per Chicago School of antitrust thought, primary market competition is a sufficient safeguard against the secondary market. Therefore while finalising a product the customer needs to consider the maintenance cost, replacements, work, charges, as the cost of ownership. Which

²⁸⁵ *Telefonaktiebolaget LM Ericsson v. Competition Commission of India*, W.P.(C) 464/2014 (Delhi HC)

²⁸⁶ T. Ramappa, *Competition Law in India: Policy, Issues, and Developments* 260 (Oxford University Press, New Delhi, 3rd edition, 2014)

²⁸⁷ Vikas Kathuria, "Vertical restraints under Indian Competition Law: whither law and economics" 10 *Journal of Antitrust Enforcement* 194, 205 (2022)

²⁸⁸ The Competition Act, 2002 (Act 12 of 2003), s.. 4(2)(a)

consequently may hamper the firms who malafidely exploit any customer in the aftermath when the customer makes their decision in coherence with the mentioned fact.²⁸⁹ The consumer has the right to refuse the buying of the primary product if the manufacturer overcharges for spare parts, which ultimately forces the manufacturer to lower the market price. If a manufacturer overcharges for spare parts, consumers will refuse to buy the primary product, forcing the manufacturer to lower aftermarket prices.

In stark contrast, the Post Chicago School, influenced by behavioural economics, argues the Chicago model relies on highly unrealistic assumptions regarding human rationality.²⁹⁰ The Post-Chicago analysis takes a different view of aftermarket competition by focusing on the limitations faced by consumers at the time of purchase. Consumers may not always be able to predict future repair expenses or assess the long-term cost implications of owning a product, particularly where manufacturers do not provide clear information about spare parts and maintenance costs. Replacing a primary product with alternative leads into financial loss due to depreciation and switching cost. A manufacturer may take undue advantage of such a situation. This post Chicago paradigm has influenced Indian regulatory bodies significantly or motivated them.²⁹¹

CONSUMER RIGHTS vs RIGHT TO REPAIR

The interplay between design monopolies and consumer deception is a critical aspect of market regulation. Manufacturers frequently employ aggressive marketing and user warnings to deter consumers from utilizing independent repairers. Under Section 2(28) of the Consumer Protection Act, 2019, a "misleading advertisement" includes any false description or misrepresentation regarding the nature or quality of a product.²⁹² When OEMs disseminate campaigns claiming that utilizing third-party, non-infringing spare parts will inherently damage the device or pose severe safety risks, without providing empirical substantiation, such conduct straddles the line of misleading advertisements.

²⁸⁹ Richard Posner, *Antitrust Law* 210 (University of Chicago Press, Chicago, 2nd edition, 2001)

²⁹⁰ Herbert Hovenkamp, *The Antitrust Enterprise: Principle and Execution* 105 (Harvard University Press, Cambridge, 2005).

²⁹¹ Avirup Bose, Smriti Parsheera, and Ajay Shah, "Competition Issues in India's Online Economy" *SSRN Electronic Journal* 12 (2017)

²⁹² The Consumer Protection Act, 2019 (Act 35 of 2019) s. 2(28).

By asserting that only proprietary and design law protected machines are safeguarded, the manufacturers misguide their consumers to maintain aftermarket monopoly. Also, under section 89 of Consumer Protection Act, 2019, the imprisonment and heavy fines to be imposed for misleading advertisements play a deterrent role.²⁹³ This provision acts as a shield against the prevalence of aftermarket designed based monopolies.

In direct response to the weaponization of intellectual property in aftermarkets, the Department of Consumer Affairs constituted a committee to develop a comprehensive "Right to Repair" policy framework for India in 2022.²⁹⁴ The Right to Repair movement questions the extent to which manufacturers should be able to control products after they have been sold to consumers. It argues that ownership of a product should include the ability to repair, maintain, and modify it through independent repair providers and alternative sources of spare parts. Therefore the reasonable restriction provided through Intellectual property rights may restrict the consumer choice and ascertain irrelevant restrictions in repairing markets.²⁹⁵ Integrating repair targets into extended producer responsibility (EPR) frameworks shifts the economic burden of waste back onto the manufacturer, incentivizing the creation of durable, modular designs

CONCLUSION AND WAY FORWARD

The relationship between intellectual property law and competition law should not be viewed as one of inherent conflict. Although the design act 2000 and competition act 2002 are being relevantly revolved and ascertain the important economic transactional expects, but at the same time, they need to protect the innovation while adhering to the competition in the market. The design act 2000 definitely provides the reward for an innovative design by granting the exclusive rights, whereas the competition act 2002, ascertains such rights must not be exercised in a restricted consumer choice or which is detrimental to the competition.

They show rises when they design protection that provides recognition beyond its limit and ultimately used as a method of controlling which are definitely related to markets in after

²⁹³ The Consumer Protection Act, 2019 (Act 35 of 2019) s. 89.

²⁹⁴ Department of Consumer Affairs, Government of India, "Report of the Committee on Right to Repair" (2022).

²⁹⁵ Aaron Perzanowski and Jason Schultz, *The End of Ownership: Personal Property in the Digital Economy* 85 (MIT Press, 2016)

products. The design registration helps in preventing the spare or repair parts and services beyond the technical protection that has been granted to any significant innovation and ultimately may create recognizable restrictions for the market, competitors and the consumer as well.

It is impeded on the competition act authorities to examine the role of intellectual property while operating the changing demands of the market, especially where consumer choice may easily get influenced by the way of digital and technological advancements. The principle which has been enunciated under Shamsher Kataria judgement provides an important pedestal to analyse this scope where market manufacturers use intellectual property claims to restrict the access to repair and replacement services.

Therefore, it is without any doubt can be concluded that any policy modification or development in future must be considered in coherence with consumer autonomy and repair and replacement rights. The tool may be the principle of right to repair framework and the consumer protection act 2019, which can assist in determining whether intellectual property holders lead the legitimacy of the protection of an innovation or biased limitation on the competition in the market. At last, it can be asserted that maintaining. This balance will allow. Design protection to secure the creativity While ensuring at the same time that such exclusive rights not to not to be used as a method for a restricted exclusion in the real market.

CHAPTER 8: USER INTERFACE (UI), GRAPHIC, AND DIGITAL DESIGN PROTECTION IN THE TECHNOLOGY SECTOR

BY TARUMITA BISWAS

INTRODUCTION

The paradigm shift in the era of a growing economy grounded in Cyber and Technology has also led to a perceived need to upgrade their statutes. While Intellectual property rights address people's intangible property of "Intellect", Cyber offers a new vision of the Modern Juridical Sciences. While most of the work has been shifted to online platforms, modern computing, standardised cloud infrastructure, and backend and front-end functionality have been commoditised, and the relevant legal chaos of Intellectual Property has been shifted too.

In the attention-based economy, website design and front-end interfaces, dark patterns, and the **“Look & Feel”** ²⁹⁶ asset classes of visual, structural, and dynamic designs and functions become assets under claimable intellectual property rights, with the owners of those websites and software applications becoming parties to litigation.

While the Intellectual Property law is based on a 19th- and 20th-century perspective, the development of digital entities has led the traditional IP regime to evolve. The traditional "Designs Act"²⁹⁷ recognises "articles of manufacture." Still, the lawmakers were unsure whether the screen that displays the digital content is an "article" or whether the software itself is an intangible "article"?

²⁹⁶ “Bridging the Gap: Improving Intellectual Property Protection for the Look and Feel of Websites – NYU Journal of Intellectual Property & Entertainment Law” <https://jipel.law.nyu.edu/vol-3-no-2-3-brown/> (Last Visited: June 15, 2026)

²⁹⁷ Parliament of India, *The Designs Act, 2000* (2000) <https://www.indiacode.nic.in/bitstream/123456789/1917/1/A2000-16.pdf> (Last Visited: June 14, 2026)

Traditional IP rejected the concept of GUIs²⁹⁸, as those were considered ephemeral. Courts and lawmakers are now being forced to adopt and recognise the systematic manipulation of electronic signals. In UI protection, *IP regimes must not overlap in a way that creates perpetual monopolies over functional items*²⁹⁹. Copyright and Design Law protect aesthetics (form); Patent Law protects utility (function).

UI protection is not limited to corporate IP issues but is inextricably linked to anti-fraud enforcement in cyberspace. Cybercriminals rely on typo-squatting and "UI-squatting"³⁰⁰ to launch phishing attacks by maliciously extracting the CSS (Cascading Style Sheets) and HTML code of banking portals or cryptocurrency exchanges to create pixel-perfect digital clones. Under the cyber law frameworks of the Indian Information Technology Act, 2000, the IT Rules, 2021, or the U.S. Digital Millennium Copyright Act, 1998, malicious sites are often taken down based on IP infringement notices. If a bank doesn't claim clear Copyright, Design, or trademark rights over its unique digital interface, it loses its legal weapon to force ISPs and web hosts to take down deceptive phishing clones.

The internet access is borderless. Software can be deployed globally the moment it goes live, but the legal framework in cyberspace and its services lack global harmonisation. While the U.S. allows design patents for GUIs, the EU handles them under the Community Design framework; other jurisdictions, including India, are navigating this through complex interpretations of existing legal frameworks and recent judicial interpretations, given the lack of clear statutory amendments.

COPYRIGHT AND THE “LOOK AND FEEL” DEBATE: THE NON-LITERAL COPYING FRONTIER

²⁹⁸ Staff T, “GRAPHICAL USER INTERFACE (GUI)” (*The Law Dictionary*, October 19, 2012) <https://thelawdictionary.org/graphical-user-interface-gui/> (Last Visited: June 14, 2026)

²⁹⁹ Moffat VR, “MUTANT COPYRIGHTS AND BACKDOOR PATENTS: THE PROBLEM OF OVERLAPPING INTELLECTUAL PROPERTY PROTECTION,” vol 19 (2004) https://btlj.org/data/articles2015/vol19/19_4/19-berkeley-tech-l-j-1473-1532.pdf (Last Visited: June 15, 2026)

³⁰⁰ Alghenaim MF and others, “Phishing Attack Types and Mitigation: A Survey,” Lecture notes on data engineering and communications technologies (2023) https://doi.org/10.1007/978-981-99-0741-0_10 (Last Visited: June 15, 2026)

The Indian and International Copyright Acts cover and protect the literal copying of an existing Intellectual Property. In Cyber ground, Copyright can protect one developer's own generated code and UI if it has been "Literally" copied, for example, via the direct "Ctrl+C / Ctrl+V" theft. The Copyright Act can help the developer create their own backend, just as it prevents theft/plagiarism of an author's or creator's work.

But what about copying the behavioural flow of an existing design of a website or software? Developers can create a "clean room design" with their own code that can create the same outcome and behaviour as an existing one. Can Copyright protect the non-literal "look and feel" element of software even when the source code is entirely distinct?

This gives birth to "SSO Doctrine"³⁰¹. SSO means Structure, Sequence, and Organisation of a program. In the case of *Whelan Associates v. Jaslow Dental Laboratory (U.S., 1986)*³⁰² The U.S. Court gave a high-water mark for UI Copyright. The "idea" of a website, file format, interface, or the overall expression is meant for a broader purpose, and is not protectable under Copyright Laws. The basic purpose of such judgment was to prevent the monopolies of a software's "look and feel".

The *Whelan Standard* soon failed in *Computer Associates International, Inc. v. Altai, Inc. (U.S., 1992)*³⁰³, as its interpretation went too far, threatening protections for cyber innovation by granting developers patents-in-disguise through copyright law. The Court established the Abstraction-Filtration-Comparison (AFC) Test³⁰⁴, which remains the global gold standard for analysing non-literal copying.

The SSO doctrine and the AFC test have been adopted in Indian cyber jurisprudence. In *Maraekat Infotech Ltd. v. Naylesh V. Kothari (Bombay High Court)*³⁰⁵, the Court established the SSO Doctrine, explicitly recognised that a computer program's Copyright extends beyond literal

³⁰¹ School SL, "Intellectual Property Rights and Standard-Setting Organizations | Stanford Law School" (Stanford Law School) <https://law.stanford.edu/publications/intellectual-property-rights-and-standard-setting-organizations/> (Last Visited: June 17, 2026)

³⁰² *Whelan Associates v. Jaslow Dental Laboratory* 609 F. Supp. 1307, (Jan 22, 1985)

³⁰³ *Computer Associates International, Inc. v. Altai, Inc.* 982 F.2d 693

³⁰⁴ Law PI, "The Abstraction-Filtration-Comparison (AFC) Test" (PERINOT INNOVATION LAW) <https://perinotip.com/blog/f/the-abstraction-filtration-comparison-afc-test> (Last Visited: June 17, 2026)

³⁰⁵ *Maraekat Infotech Ltd. vs. Naylesh V. Kothari and Ors.* (23.02.2016 - BOMHC) : MANU/MH/3715/2016

code. Similarly, in *Burlington Home Shopping Pvt. Ltd. v. Rajnish Chibber*³⁰⁶, it is affirmed that copying the architecture and compilation of a database (a non-literal element) constitutes infringement.

In the TRIPS Agreement, it is codified that "Copyright protects the expression of an idea, not the idea itself"³⁰⁷. The Merger Doctrine³⁰⁸ dictates that when there are only a limited number of ways to express an idea, the idea and the expression "merge." For example, a developer has an "idea" to add a calendar to their UI, there are very limited ways of "Expression" as the count and sort of days, months, and Years is fixed. The copyright claim to these is denied to prevent the monopolisation of necessary UI designs. The Scènes à Faire Doctrine³⁰⁹, a French term, which means "scenes that must be done". E.g. the 3-Line Menu Icon (Hamburger Menu), Add to Cart to Option Icons like a Shopping Cart or a Shopping Bag, Magnifying Glass Icon for Search, etc., are the digital Scènes à Faire.

A landmark case for *Lotus Development Corp. v. Borland International (U.S., 1995)*³¹⁰. Borland copied the exact visual menu command hierarchy (Copy, Print, Quit, etc.) that Lotus created. The respondent defended themselves, stating that users wouldn't have to relearn the commands and that Borland had written its own code. The Court ruled against Lotus. The menu command hierarchy is an uncopyrightable "Method of Operation", not a creative expression. In the case of *Navitaire Inc v. Easyjet Airline Co (UK, 2004)*³¹¹, through the European and Commonwealth law, the UK High Court ruled that Copyright does not protect the business logic or the functional interface of a software or website if the backend is not a "copy-paste" theft, but rather self-created.

³⁰⁶ *Burlington Home Shopping Pvt. Ltd. vs. Rajnish Chibber* (20.10.1995 - DELHC) : MANU/DE/0718/1995

³⁰⁷ Soni B, "Can You Copyright an Idea? Understanding What Is and Isn't Protectable" Sonisvision (February 12, 2025) <https://www.sonisvision.in/blogs/can-you-copyright-an-idea-understanding-what-is-and-isnt-protectable> (Last Visited: June 17, 2026)

³⁰⁸ Intelopedia, "Doctrine of Merger and Copyright Law | Intelopedia" (Intelopedia, June 4, 2025) <https://www.bananaip.com/intellepedia/doctrine-of-merger-in-copyright-law-india/> (Last Visited: June 17, 2026)

³⁰⁹ Pandey V, "The Relevance of Doctrine of Scène à Faire in Copyright Law" *Copyright - India* (January 8, 2015) <https://www.mondaq.com/india/copyright/365210/the-relevance-of-doctrine-of-sc%C3%A8ne-%C3%80-faire-in-copyright-law> (Last Visited: June 19, 2026)

³¹⁰ *Lotus Development Corp. v. Borland International* 788 F. Supp. 78

³¹¹ *Navitaire Inc v. Easyjet Airline Co* [2004] EWHC 1725 (Ch), [2005] ECC 30, [2006] RPC 3, [2005] ECDR 17, [2005] Info TLR 1

A most significant judgment for the U.S. Supreme Court, *Google LLC v. Oracle America, Inc.* (U.S. Supreme Court, 2021)³¹², brings up a new aspect of API Wars. Application Programming Interfaces (APIs) are programming systems that enable multiple software applications to communicate with one another. Google copied roughly 11,500 lines of code from Oracle's Java SE API to create the Android system. The Court declared such "copy" of code to develop an Operating System was "Fair Use". This ruling enshrined the principle of "interoperability"³¹³ between the different technologies in cyberspace.

Under Indian Law, two distinct copyright classifications govern software development and creative works, each with its own complex enforcement mechanisms. First, the backend source code and object code are protected as Literary Works (Section 2(o)), and the front-end Graphical User Interface (GUI) is protected separately as an Artistic Work (Section 2(c)) of the Indian Copyright Act, 1957. This bifurcation is critical because it leads directly into the "Section 15 Trap"³¹⁴. If a UI is treated only as an "artistic work," it will become highly vulnerable to losing its protection once industrially applied to an article.

THE GUI BREAKTHROUGH: REDEFINING “INDUSTRIAL DESIGN” IN THE DIGITAL AGE

When companies found the copyright law insufficient to provide protection, they turned to the Industrial Design Law. The law is made to protect the Industrial (offline, physical) GUIs: visual, ornamental, and aesthetic features applied to an object of utility on a functional device. Internationally, the progress was underway with WIPO³¹⁵. They administered an international classification system for industrial designs with the Locarno Agreement³¹⁶ and introduced Class

³¹² Google LLC v. Oracle America, Inc. 593 US __ (2021)

³¹³ Xue X, Standardization Development Research Center, and China Electronics Standardization Institute, *Standards and IPRs* <https://www.etsi.org/images/files/sosinteroperability/sosinteropiibackground02.pdf> (Last Visited: June 20, 2026)

³¹⁴ Deepak JS, "Scope of Section 15" (*SpicyIP*, February 20, 2010) <https://spicyip.com/2010/02/scope-of-section-15.html> (Last Visited: June 20, 2026)

³¹⁵ [World Intellectual Property Organization](https://www.wipo.int/)

³¹⁶ "Locarno Agreement Establishing an International Classification for Industrial Designs" (*Treaties*) <https://www.wipo.int/en/web/treaties/classification/locarno/index> (Last Visited: June 20, 2026)

14-04: Screen Displays and Icons³¹⁷. Right at that time, India did not adopt the Locarno Agreement and remained stuck to the archaic interpretations of the Designs Act, 2000, for years. The Designs Office blanket-rejected GUI applications until a massive legal showdown occurred.

The definitions of "Article" (Section 2(a)) and "Design" (Section 2(d)) mentioned in the Designs Act, 2000, Article means any item being manufactured or a substance which might be natural or artificial, Design means the definitive features of an Article, like its specific shape, colour, configuration, pattern or ornament made manually, mechanically or by chemicals, which makes the Article different and unique from others.

The Controller raised traditional objections to GUI registrations, arguing that they were not copyrightable. GUI cannot be physically touched; its Non-Physicality bars it from being an Article. GUIs are created with written code, not through "manual, mechanical, or chemical" industrial processes, as traditionally understood; they are not a design. A GUI is only visible when the device or screen is switched ON. It lacks permanence until it is commanded to show; it cannot be a design. The Registry claimed that GUIs were "artistic works" under the Copyright Act. Therefore, GUIs are expressly excluded from design registration.

The Landmark Resolution in Indian Jurisprudence: NEC Judgement, 2026

With the landmark judgement of *NEC Corporation v. Controller of Patents and Designs, Cal HC 2026*³¹⁸, on March 9, 2026, the most burning question was structured down by the Calcutta High Court (IPR Division): "Whether a Graphic User Interface (GUI) satisfies the criteria of a design making it eligible for registration under the Act?"

Justice Ravi Krishan Kapur, the Calcutta High Court (IPR Division), consolidated five statutory appeals filed by global tech and manufacturing giants: NEC Corporation, ERBE Elektromedizin GmbH, Abiomed Inc., and TVS Motor Company Limited. The Hon'ble Court dismantled the outdated interpretations of the Designs Act and the Designs Office's archaic objections, establishing a definitive charter for GUI protection in India:

³¹⁷ Wipo, "Locarno Classification"

https://locpub.wipo.int/enfr/?class_number=14&explanatory_notes=show&id_numbers=show&lang=en&menulang=en&mode=location=&version=20190101 (Last Visited: June 20, 2026)

³¹⁸ NEC Corporation vs. The Controller of Patents and Designs and Ors. (09.03.2026 - CALHC) : MANU/WB/0520/2026

Redefining Article: The requirement that a GUI must be "manufactured or sold separately" was rejected. GUIs vary depending on the context; they can appear on a smartphone screen, a vehicle dashboard, or a medical monitor. The GUI is the aesthetic pattern or a "Design" from Section 2(d) applied to that finished Article. The terms "manual, mechanical, or chemical" in the definition of Design are illustrative, not exhaustive. The systemic process by which an electronic signal is rendered on an electronic device is also an industrial process, thereby qualifying the definition itself. The Court also clarified that Section 2(d) nowhere mandates that a design be permanently visible or permanently affixed.

The "Test of Noticeability", which was established by the Court, has been borrowed from international jurisprudence, specifically relying on the English decision in *K.K. Suwa Seikosha's Design Application [1982]*³¹⁹. It concluded that a GUI that disappears when a device is powered down does not erase its design status.

Also, in the Form vs. Function debate, the Court ruled that the visual features, such as functions constructed using aesthetic choices as arrangement, proportion, spacing, typography, iconography, colour palettes, etc., which are not merely functional keys but produce an aesthetic impression capable of being "judged solely by the eye," qualify for design protection. India aligns its IP framework with the EU and the U.S., granting technology companies a powerful new weapon against cyber-cloning rather than relying on the difficult, code-centric tests of copyright infringement.

THE SECTION 15 TRAP: THE COPYRIGHT AND DESIGN LAW BLACK HOLE

In India, a creator must make a statutory election under Section 15 of the Copyright Act, 1957, which governs the overlap between "artistic works" and "industrial designs," as they cannot enjoy both protections simultaneously. Section 15 prevents the duplication of intellectual

³¹⁹ Sabharwal A, "India: Graphical User Interface (GUI) Capable of Design Registration Rules High Court" (*candcip*, March 29, 2023) <https://www.candcip.com/single-post/india-graphical-user-interface-gui-capable-of-design-registration-rules-high-court> (Last Visited: June 20, 2026)

property monopolies by requiring creators to give up their copyright protection option when choosing the industrial design registration option.

- **Section 15(1)** states that if an artwork is officially registered as an industrial design, it will automatically lose its copyright protection permanently.
- **Section 15(2)** states that if an artwork qualifies for design registration but is not registered, it will retain its copyright protection for a limited time period. However, once an unregistered industrial design is reproduced on more than 50 articles (e.g. mass-produced or, controversially, downloading a digital interface), the Copyright of that unregistered Design will automatically expire as it will become part of the public domain.

In the case of *Microfibres Inc. v. Girdhar & Co. (Delhi High Court)*³²⁰ Section 15 was interpreted. The plaintiff created original artistic drawings and applied those to mass-produced upholstery fabrics. The Court held that Section 15 is to prevent "unending monopolies." A creator cannot use the lengthy term of Copyright (life + 60 years) to protect a mass-produced industrial product. Because the Design was industrially applied but not registered with the plaintiff, all copyright protection was extinguished. In *Ritika Pvt. Ltd. v. Biba Apparels Pvt. Ltd. (Delhi High Court)*³²¹, a similar incident occurred. The fashion designer's unregistered sketches were printed onto more than 50 physical garments. The Court explicitly stripped copyright protection and reaffirmed the logic of the Microfibres case.

A creator is granted to use their unregistered Design to an upper limit of exactly 50 reproductions. When reproducing the 51st product, their intellectual property enters the public domain, creating a terrifying legal black hole for software and UI developers. E.g., an app is compiled by a graphic designer who creates an original set of custom icons or a unique navigation menu for a new fintech mobile application; such creations will unquestionably be "artistic works" under Section 2(c) of the Copyright Act. Once the app is compiled, they can make it available on the Play Store or App Store. Now, as per the NEC Corporation judgment, a GUI is recognised in India as an industrial design applied to an article via an industrial process. The developer must file a design application before launching the app, and the Section 15(2) usage countdown (download counts) begins. If the developer neglects to register, and once the

³²⁰ Microfibres Inc. and Ors. vs. Girdhar and Co. and Ors. (28.05.2009 - DELHC) : MANU/DE/0647/2009

³²¹ Ritika Private Limited vs. Biba Apparels Private Limited (23.03.2016 - DELHC) : MANU/DE/0784/2016

51st user downloads the app, the developer instantly and irreversibly loses all copyright protection over its interface.

In 2025, in the judgment of *Cryogas Equipment (P) Ltd. v. Inox India Ltd. (Supreme Court of India, April 2025)*³²², INOX claimed copyright infringement on the basis of its engineering drawings and literary works. Appellant claimed that these engineering drawings and literary works were mass-produced industrial designs and therefore exempted from copyright under Section 15(2) of the Copyright Act. The Supreme Court decided it by formulating a two-fold test for artistic works vs. industrial designs. The legislative intent behind it was to force creators of mass-market commercial goods into the shorter 15-year monopoly of the Designs Act.

The Intermediary Liability Crisis in Section 15 Trap extends deeply into cybersecurity and anti-piracy efforts. For example, a bank's UI is cloned by a cybercriminal running a phishing server, who can send a "Notice and Takedown" order citing copyright infringement to the hosting provider. The Trap easily allows the phishing syndicate to make their defence. They can claim, for example: "The bank's app has been downloaded millions of times without a prior design registration; the bank's copyright is legally dead."

The inflexible maximum limit of "50 production threshold" for digital products highlights a key deficiency in considering software to be physical property. In cyber technology, 50 copies of the product can be created within no time at all. An unfair demand on independent software manufacturers calls for an immediate legislative change.

FUNCTIONALITY VS. AESTHETICS: THE PATENT AND TRADE DRESS FRONTIER

While a User Interface (UI) faces a wrestle between Copyright and Design Laws over a static visual element, Patent law is concerned exclusively with its functional behaviour. When a developer creates an interactive mechanism with specialised animation, or a new method for

³²² SpicyIP, "[Part I] Cryogas Judgment: Supreme Court Stops Copyright from 'Gaslighting' Design" (*SpicyIP*, April 18, 2025) <https://spicyip.com/2025/04/part-i-cryogas-judgment-supreme-court-stops-copyright-from-gaslighting-design.html> (Last Visited: June 22, 2026)

secure contactless payment processes, they are dealing with functional utility, not mere aesthetics.

However, securing a patent for software-driven interfaces in India requires compliance with one of the strictest statutory bars in global IP law: Section 3(k) of the Patents Act, 1970. This section excludes "a mathematical or business method or a computer programme per se or algorithms" from patentability. The Legislative Intent Behind the words "per se" (by itself) was highly deliberate. As per the Report of the Joint Parliamentary Committee on the Patents (Second Amendment) Bill, 1999³²³ The qualifier was specifically added to ensure that genuine technological inventions are not denied patents merely because they are computer programs.

The Ferid Allani Benchmark³²⁴, from the landmark judgement of *Ferid Allani v. Union of India* (2019), of the Delhi High Court³²⁵, clarified the interpretation of Section 3(k). The Patent Office repeatedly rejected a patent claim for a method of accessing web information sources, finding it to be a mere computer program. The High Court crushed this archaic approach. The High Court upheld the modernity in the digital era, mentioning that in today's world, from automobiles to microwaves, almost every invention runs on software. The Ferid Allani case established the "Technical Effect" Test. The Court held that the statutory bar applies only to abstract code. If a software-driven UI demonstrates an exceptional standout in "technical effect" or "technical contribution, it transcends the Section 3(k) exclusion. A UI element that merely looks nice and maintains a special aesthetic cannot be patented, but can be governed under "Design", but a Special UI element that fundamentally improves the operation of the computing device can be patented.

When statutory IP regimes of Copyright, Design, and Patents fail software developers, the ultimate fallback is the common law remedy of Passing Off to protect Digital Trade Dress³²⁶.

³²³ Chaturvedi TN and others, "THE PATENTS (SECOND AMENDMENT) BILL, 1999" (2001) <https://spicyip.com/wp-content/uploads/2020/02/Patents-Act-REPORT-OF-THE-JOINT-COMMITTEE-19-Dec-2001.pdf> (Last Visited: June 21, 2026)

³²⁴ Neha Arora and Dr. Joyita Deb, "[The Viewpoint] A Future-Proof Indian Patent Office? Patenting AI Inventions in India" (*Bar And Bench - Indian Legal News*, February 22, 2022) <https://www.barandbench.com/view-point/a-future-proof-ipo-patenting-ai-inventions-in-india> (Last Visited: June 23, 2026)

³²⁵ Ferid Allani vs. Union of India and Ors. (12.12.2019 - DELHC) : MANU/DE/4323/2019

³²⁶ Tiwari A † and The West Bengal National University of Juridical Sciences, "Passing off and the Law on 'Trade Dress' Protection: Reflections on Colgate v Anchor," vol Vol 10 (2005) <http://docs.manupatra.in/newslines/articles/Upload/09AE0DD1-E248-4AC7-9E9D-91FE5675E4AB.pdf> (Last Visited: June 23, 2026)

Trade dress refers to the overall visual appearance, packaging, and "look and feel" of a product that signifies its source to consumers. In the physical world, this means the specific, identifiable shape or colour scheme of a product. In cyber law, trade dress is the overall architectural layout of a software interface, the code that powers it, and the specific combination of colour palettes, tab and switch placements, typography, and navigational menus.

Developers rely on the "Classical Trinity" established in foundational Indian passing-off cases, such as *Cadila Health Care Ltd. v. Cadila Pharmaceuticals Ltd*³²⁷, to protect a UI under trade dress. The developer must prove 3 credentials to claim it.: (1) goodwill attached to the digital interface, (2) any misrepresentation by the intruder that deceives users, and (3) resulting commercial damage.

In *Micolube India Limited v. Rakesh Kumar, the Delhi High Court*³²⁸ affirmed that an action for passing off can coexist with design rights. So, the developer can seek "Dual Protection" if a UI layout is registered as a design and simultaneously achieves such massive market recognition that it acts as a brand identifier. The developer is entitled to both statutory design rights and common law trade dress rights.

The Limit of Trade Dress: *Apple Inc. v. Samsung Electronics Co.*³²⁹ is the most famous global case that addressed UI trade dress, specifically the iPhone's visual grid of colourful square icons with rounded corners. This case served as the basis for the Functionality Doctrine. The principle holds that one cannot use the trade dress claim to monopolise a basic functional feature. If a specific UI layout is the only logical way to express information, the layout is deemed to be called only "functional." Courts will deny trade dress protection to functional layouts to prevent monopoly over standard user-experience (UX) conventions. To win a digital trade dress claim, the developer must prove the "Classical Trinity".

This intersection of trade dress and passing off is another potent weapon against cyber fraud. Modern cybercriminals are not limited to URL typo-squatting alone; they are engaging in "UI-squatting, like deploying automated scripts to scrape the exact CSS (Cascading Style Sheets) of banking portals or crypto exchanges, creating pixel-perfect phishing clones.

³²⁷ *Cadila Health Care Ltd. vs. Cadila Pharmaceuticals Ltd.* (26.03.2001 - SC) : MANU/SC/0199/2001

³²⁸ *Micolube India Limited and Ors. vs. Rakesh Kumar and Ors.* (15.05.2013 - DELHC) : MANU/DE/1251/2013

³²⁹ *Apple, Inc. v. Samsung Electronics Co., Ltd.*

United States District Court, Ninth Circuit, California, N.D. California, San Jose Division, Nov 12, 2013

CONCLUSION AND THE PATH FORWARD: TOWARDS A *SUI GENERIS* FRAMEWORK

The current ecosystem of Indian Legal Jurisprudence is incapable of protecting digital interfaces in the technology sector and is highly fragmented. Developers are forced to cobble together a **"Frankenstein" IP strategy**³³⁰. They have to rely on Copyright for backend code, the Designs Act for visual aesthetics, leap away from the Section 15 overlap trap, and hope for common-law trade dress (passing off) to act as a defence against cyber clones. This creates severe legal uncertainty, which harms developers' innovative spirit. When the boundaries of IP protection are unclear, large technology monopolies can misuse their legal grants and litigation powers to stifle smaller developers. At the same time, cybercriminals exploit the grey areas to build phishing sites. A modern digital economy requires a modern digital legal framework.

To address the fragmented intellectual property regime for UI/UX, the best academic solution is to adopt a *sui generis* regime. Similar to the bespoke protection system developed for the layout of integrated circuits (SICLD Act)³³¹ such a law for GUIs would acknowledge their unique functionality and aesthetics. It should provide for a reduced monopoly period (3-5 years), which is in line with the fast pace of the software industry, and protect dynamic aspects of user interface design.

Apart from a special regime, some immediate statutory amendments must be effective. The Designs Act should be reviewed to recognise "virtual environments" as registrable articles, in line with the current view of most designs in the world of mass production. Concurrently, the Copyright Act must have the digital exemption removed from Section 15 snares, clarifying that the "50-reproduction rule" devised for mass-produced physical goods should no longer apply to unlimited software downloads.

³³⁰ "Frankenstein and Copyright: 5 Things You Should Know" (Trademark, Copyright, Advertising & the Law | Foley Hoag LLP)
<https://foleyhoag.com/news-and-insights/blogs/making-your-mark-blog/2018/october/frankenstein-and-copyright-5-things-you-should-know/> (Last Visited: June 23, 2026)

³³¹ Government of India, *The Semiconductor Integrated Circuits Layout-Design Act, 2000* (2000)
<https://www.indiacode.nic.in/bitstream/123456789/1998/1/A2000-37.pdf> (Last Visited: June 14, 2026)

Since cyberspace transcends borders, any reforms implemented must be synchronised globally. There needs to be alignment with WIPO's projects and the Riyadh Design Law Treaty (DLT)³³². The advantage of doing this is that it will facilitate the protection of virtual Design irrespective of any geographical limitations.

To summarise, balancing the laws surrounding modern cyberlaw is a difficult and delicate process. This also provides a significant incentive to develop secure, well-designed digital environments in the online world. Furthermore, it protects foundational navigational systems to prevent monopolisation. The most difficult part of contemporary high-tech law is how to create a digital-first IP regime without diminishing the internet's ability to function as a whole.

³³² “Riyadh Design Law Treaty” (*Treaties*) <https://www.wipo.int/en/web/treaties/ip/rdlt/index> (Last Visited: June 23, 2026)

CHAPTER 9: DESIGN PIRACY, COUNTERFEITING, AND THE ENFORCEMENT CHALLENGES

BY AKANKSHA PUNDIR

INTRODUCTION

The OECD and the European Union Intellectual Property Office estimate counterfeit and pirated trade at up to USD 509 billion, 3.3 per cent of world trade, in 2016³³³; a 2019 update puts it at USD 464 billion, 2.5 per cent of world trade³³⁴. India, among the world's fastest-growing manufacturing markets, is deeply exposed: comparative literature identifies India, alongside China, as a principal producer of counterfeit and pirated goods.³³⁵ Legitimate reliance on the design system is substantial too: in 2024–25 alone, 43,005 design applications were filed and 30,349 registered.³³⁶ Design piracy — unauthorised reproduction of registered designs — and counterfeiting — marketing of imitative goods — are no longer localised or low-technology; the enforcement problem is now cross-border and increasingly digital.

This chapter asks whether India's legal framework for design protection adequately addresses contemporary piracy and counterfeiting. The Designs Act, 2000 — enacted to replace the colonial Designs Act, 1911 and conform to TRIPS — has not been significantly amended since, while the market it regulates has been transformed by digital replication, transnational supply

³³³ OECD and European Union Intellectual Property Office, *Trends in Trade in Counterfeit and Pirated Goods* (OECD Publishing/EUIPO, Paris, 2019).

³³⁴ OECD and European Union Intellectual Property Office, *Global Trade in Fakes: A Worrying Threat* (OECD Publishing/EUIPO, Paris, 2021).

³³⁵ Dominika Bochańczyk-Kupka, "A Comparative Analysis of Intellectual Property Rights Protection in China and India in the XXI Century" 9 *Journal of International Studies* 56 (2016).

³³⁶ Office of the Controller General of Patents, Designs and Trade Marks, Annual Report 2024–25 (Government of India, 2025).

chains and online retail. The chapter argues that although the Act remains foundational, its core architecture is static, a deficiency compounded by five features examined below: the absence of criminal liability; a statutory damages cap whose deterrent value has eroded; statutory silence on online infringement and platform liability; weak cross-border enforcement instruments; and non-membership of the principal international registration system.

CONCEPTUAL UNDERSTANDING AND BACKGROUND

Design law protects the visual appearance and ornamental features of an article — the attributes that render it distinctive, and that pirates appropriate. Indian law separates art for its own sake, protected under copyright, from art applied to commerce, protected under design law; an unregistered design capable of copyright protection loses it once reproduced industrially more than fifty times.³³⁷ The minimal treatment of designs in TRIPS is itself instructive: the subject occupies only two articles, a reflection of its low priority in the treaty negotiations outside the then-European Communities.³³⁸

Section 2(d) of the Designs Act, 2000 defines a "design" as features of shape, configuration, pattern, ornament, or composition of lines or colours applied to any article, whether two-dimensional or three-dimensional or both, by any industrial process or means, which in the finished article appeal to and are judged solely by the eye; the definition excludes any mode or principle of construction and anything which is in substance a mere mechanical device.³³⁹ The requirement of application "by any industrial process or means" effectively excludes purely digital designs — a gap of growing importance as digital manufacturing and 3D printing expand.³⁴⁰

³³⁷ Shwetasree Majumder and Eva Bishwal, "Industrial design in India" in Dana Beldiman (ed.), *Design Law* 209 (Edward Elgar Publishing, Cheltenham, 2024).

³³⁸ Carlos M. Correa, *Trade Related Aspects of Intellectual Property Rights: A Commentary on the TRIPS Agreement* (Oxford University Press, Oxford, 2nd edn., 2020).

³³⁹ The Designs Act, 2000 (Act 35 of 2000), s. 2(d).

³⁴⁰ Lisa Puthooparampil and Chahat Abrol, "Need for Unregistered Design Rights in India: A Contemplative Cogitation" 29 *Journal of Intellectual Property Rights* 1 (2023).

The 2000 Act replaced the Designs Act, 1911 largely to conform with TRIPS: Article 25 obliges protection of new or original industrial designs, while Article 26 mandates that holders be able to prevent unauthorised making, selling or importing of articles bearing a protected design commercially, for a minimum ten-year term.³⁴¹ The Act therefore implements a treaty minimum rather than a domestically generated enforcement policy: TRIPS prescribes the scope of rights but leaves the machinery of enforcement largely to national choice, and the enforcement deficits documented below cannot be attributed to the treaty. Registration confers an exclusive right for ten years, extendable by five. It is at enforcement that the Act's structural weaknesses surface; the OECD's assessment of Indian enforcement frameworks identifies institutional-capacity and coordination weaknesses as central to their effectiveness.³⁴²

EXISTING ENFORCEMENT FRAMEWORK

Civil Remedies and the Section 22 Damages Cap

Section 22 of the Designs Act, 2000 provides that any person who, without the licence of the registered owner, applies a registered design or a fraudulent or obvious imitation of it to any article for sale, imports such an article for sale, or publishes any such article for sale, infringes the design.³⁴³ The remedies are twofold: a contractual penalty of INR 25,000 per contravention, recoverable as a contract debt subject to a maximum of INR 50,000 per design, and a civil claim for compensation and an injunction. Enforcement is entirely civil: the proprietor must sue, seek interim relief at the court's discretion, and prove infringement at trial.

The damages cap is the provision's central flaw, on three grounds. First, deterrence: a ceiling of INR 50,000 per design, fixed in 2000 and unrevised since, bears no relation to the turnover of commercial-scale counterfeiting operations; where maximum liability is a negligible fraction of

³⁴¹ The Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, arts. 25, 26; The Designs Act, 2000 (Act 35 of 2000).

³⁴² OECD, "Governance Frameworks for Combatting Counterfeiting in India" in *Governance Frameworks to Counter Illicit Trade* (OECD Publishing, Paris, 2018).

³⁴³ The Designs Act, 2000 (Act 35 of 2000), s. 22.

infringing revenue, the penalty is internalised as an anticipated cost of infringing activity. Second, litigation incentives: the cap cannot realistically cover the costs of suit — Indian enterprises face high litigation costs and delays of three to five years, with only a third able to litigate at all — a burden weighing heavily on small designers and MSMEs.³⁴⁴ Third, comparative inadequacy: US design-patent infringement can attract disgorgement of the infringer's profit under 35 U.S.C. § 289; in *Apple Inc. v. Samsung Electronics Co.*, the Federal Circuit affirmed an award of US\$399 million — Samsung's entire profit from its sales of infringing smartphones — a figure exceeding the Section 22 cap by several orders of magnitude.³⁴⁵ The Supreme Court unanimously reversed the award on 6 December 2016, holding it inconsistent with § 289 insofar as the relevant "article of manufacture" may be a component of a multi-component product rather than the end product sold to the consumer.³⁴⁶ The episode does not suggest India should award similar sums, only that the cap leaves damages disproportionate to commercial-scale harm.

The Absence of Criminal Enforcement

The Designs Act, 2000 contains no criminal liability regime, in contrast both to the Copyright Act, 1957, which criminalises knowing infringement with imprisonment of six months to three years and a fine, and to the Trade Marks Act, 1999.³⁴⁷ Criminal penalties in Indian IP law are largely confined to copyright, trademark, plant-variety and biodiversity legislation; patent and design law provide none, though IP-related conduct may occasionally attract liability under customs, drug-regulation or general criminal statutes. The procedural consequences are structural.³⁴⁸ Because design piracy is not a cognisable offence, there is no FIR, no power of arrest, search or seizure directed at infringing stock or accounts, and no state machinery for

³⁴⁴ Nikhil Shah and Sanjaya Choudhury, "Impact of Unfair Trade Practices on Small and Medium Enterprises (SMEs) in India" 10 *Research Review International Journal of Multidisciplinary* 308 (2025).

³⁴⁵ *Apple Inc. v. Samsung Electronics Co.*, 786 F.3d 983 (Fed. Cir. 2015).

³⁴⁶ *Samsung Electronics Co. v. Apple Inc.*, 137 S. Ct. 429 (2016).

³⁴⁷ The Designs Act, 2000 (Act 35 of 2000); The Copyright Act, 1957 (Act 14 of 1957), s. 63; The Trade Marks Act, 1999 (Act 47 of 1999), s. 103.

³⁴⁸ Prashant Reddy Thikkavarapu, "India — Disproportionate Punishments for IP Infringement" in Kung-Chung Liu and Tianxiang He (eds.), *Criminal Intellectual Property Enforcement in Asia: Sources, Significance, and Side-Effects* (Oxford University Press, Oxford, 2026).

gathering evidence; the proprietor must assemble proof privately before suit can be brought. A proprietor who finds copied furniture at a wholesale market cannot summon police to seize stock; a representative must instead make a covert purchase, retain the invoice, and independently trace the manufacturer before an injunction can be sought, while the stock may meanwhile be moved.

Two caveats qualify this recommendation. First, Article 61 of TRIPS requires criminal procedures and penalties only for wilful trademark counterfeiting and copyright piracy on a commercial scale, and does not extend to designs; design criminalisation is a policy choice, not a treaty obligation.³⁴⁹ Second, Indian experience counsels caution: copyright prosecutions far exceed trademark prosecutions, yet conviction rates remain low,³⁵⁰ and comparative Asian experience shows arbitrariness, chilling effects and corruption risk in criminal IP enforcement, recommending fines over imprisonment and criminal proceedings sequenced after civil determinations.³⁵¹ Any criminal regime for design piracy must therefore address procedural safeguards and enforcement capacity, not merely the creation of offences.

Online Piracy and Platform Liability

The Act's silence on online design piracy is among its most consequential deficiencies. Section 79 of the Information Technology Act, 2000 grants intermediaries a conditional safe harbour from liability for third-party information hosted on their platforms, subject to statutory due

³⁴⁹ The Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 61; Kung-Chung Liu, “Comparative Study of Criminal Enforcement of IP and Reform Suggestions” in Kung-Chung Liu and Tianxiang He (eds.), *Criminal Intellectual Property Enforcement in Asia: Sources, Significance, and Side-Effects* (Oxford University Press, Oxford, 2026).

³⁵⁰ Prashant Reddy Thikkavarapu, “India — Disproportionate Punishments for IP Infringement” in Kung-Chung Liu and Tianxiang He (eds.), *Criminal Intellectual Property Enforcement in Asia: Sources, Significance, and Side-Effects* (Oxford University Press, Oxford, 2026).

³⁵¹ Kung-Chung Liu, “Comparative Study of Criminal Enforcement of IP and Reform Suggestions” in Kung-Chung Liu and Tianxiang He (eds.), *Criminal Intellectual Property Enforcement in Asia: Sources, Significance, and Side-Effects* (Oxford University Press, Oxford, 2026).

diligence.³⁵² The 2011 Intermediary Rules converted the "actual knowledge" requirement into a notice-and-takedown duty, obliging intermediaries to acknowledge and act on complaints within 36 hours³⁵³— until the Supreme Court held in *Shreya Singhal v. Union of India* that "actual knowledge" is satisfied only by a court order or governmental notification, not a private complaint, lest intermediaries over-comply and burden lawful speech.³⁵⁴ That caution was carried into the copyright context in *Myspace Inc. v. Super Cassettes Industries Ltd.*, where the Division Bench held the safe harbour applicable to copyright infringement absent actual knowledge.³⁵⁵ The Information Technology Rules, 2021, amended in 2022 and 2023, move the standard toward proactive due diligence and general monitoring;³⁵⁶ their grievance mechanism, culminating in Grievance Appellate Committees,³⁵⁷ obliges intermediaries to remove flagged content within 36 hours of a court order and resolve complaints within 72 hours. Courts have separately tested when a platform's control over listings removes it from safe harbour: in *Christian Louboutin SAS v. Nakul Bajaj*, the Delhi High Court held that a platform actively participating in an unlawful act forfeits the exemption.³⁵⁸ The Copyright Act's Section 52(1)(b)–(c) proviso is the closest analogue to notice-and-takedown: it lets an intermediary keep content down for 21 days pending a court order.³⁵⁹

³⁵² The Information Technology Act, 2000 (Act 21 of 2000), s. 79; Urs Gasser and Wolfgang Schulz, "Governance of Online Intermediaries: Observations from a Series of National Case Studies" Berkman Center Research Publication No. 2015-5 (SSRN Electronic Journal, 2015).

³⁵³ Urs Gasser and Wolfgang Schulz, "Governance of Online Intermediaries: Observations from a Series of National Case Studies" Berkman Center Research Publication No. 2015-5 (SSRN Electronic Journal, 2015).

³⁵⁴ *Shreya Singhal v. Union of India*, 2015 AIR SCW 1989

³⁵⁵ *Myspace Inc. v. Super Cassettes Industries Ltd.*, (2017) 236 DLT 478 (DB)

³⁵⁶ Ministry of Electronics and Information Technology, Government of India, Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Amendment Rules, 2022 (notified 28 October 2022); Ministry of Electronics and Information Technology, Government of India, Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Amendment Rules, 2023 (notified 6 April 2023).

³⁵⁷ Ministry of Electronics and Information Technology, Government of India, Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Amendment Rules, 2022 [establishing the Grievance Appellate Committees] (notified 28 October 2022).

³⁵⁸ *Christian Louboutin SAS v. Nakul Bajaj*, (2018) 250 DLT 549 (Delhi DB).

³⁵⁹ The Copyright Act, 1957 (Act 14 of 1957), s. 52(1)(b)–(c); Sunidhi Setia, Samanvi Narang and Suhaib Salman, "Intermediary Liability for Online Copyright Infringement in India: A Trans-Judicial Dialogue" 14 International Journal of Intellectual Property Management 17 (2024).

None of this is calibrated to design infringement, for four reasons. First, the regime is content-based and, post-*Shreya Singhal*³⁶⁰, knowledge-based: a design proprietor cannot compel a platform to act on a private notice but must first litigate to obtain a court order. Second, the due-diligence categories and prohibited-content lists are framed around speech-related wrongs, not product listings that infringe a registered design. Third, where platforms have lost safe harbour, exposure has been asserted under trade mark or consumer law, never design law; the Designs Act confers no statutory role on platforms. Fourth, unregistered designs fall outside the framework entirely. What exists is a judicially constructed body of rules framed for content and marks, not designs.

Cross-Border Enforcement

The Intellectual Property Rights Enforcement Rules, 2007, based on the World Customs Organization's model legislation, empower customs authorities to suspend the clearance of goods suspected of infringing intellectual property and to adjudicate the question of infringement itself.³⁶¹ Registered designs are one of four categories of right — alongside trademarks, copyrights and geographical indications — recordable with Customs; patents alone are excluded. The extension to designs is voluntary: Article 51 of TRIPS obliges members to provide border procedures only for counterfeit trademarks and pirated copyright works.³⁶² The regime's persistent weakness is asymmetry: the Rules fail to balance right holders against importers, present "immense potential for abuse," and have a chequered history, exemplified by the dual-SIM controversy³⁶³ — though that dispute concerned patents, not designs, illustrating the risks the recordal mechanism carries in practice. The design-specific difficulty is more direct: the infringement test — whether a design would deceive an average buyer — calls for an ocular comparison border officers are not equipped to make, and no provision obliges customs to

³⁶⁰ *Shreya Singhal v. Union of India*, 2015 AIR SCW 1989

³⁶¹ Aditya Gupta, "Border Enforcement of Intellectual Property Rights in India: Recent Developments" 1 Trade, Law and Development 192 (2009).

³⁶² The Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 51; Carlos M. Correa, Trade Related Aspects of Intellectual Property Rights: A Commentary on the TRIPS Agreement (Oxford University Press, Oxford, 2nd edn., 2020).

³⁶³ Aditya Gupta, "Border Enforcement of Intellectual Property Rights in India: Recent Developments" 1 Trade, Law and Development 192 (2009).

consult the Registry or a design expert. The Designs Act itself contributes nothing: no cross-border provision, no cooperation mechanism with foreign registries or platforms, and no design-specific procedure beyond the recordal system shared with trademarks and copyrights.

INSTITUTIONAL CAPACITY OF THE DESIGNS REGISTRY

The Designs Registry sits within the Office of the Controller General of Patents, Designs and Trade Marks, whose own reporting documents the strain. Filings have more than tripled in four years — from 14,242 in 2020–21 to 43,005 in 2024–25 — while 2024–25 examinations stood at 38,009 and disposals at 31,923, so pending applications keep growing.³⁶⁴ The consequences reach beyond administration: because enforcement presupposes registration, backlogs delay the grant on which rights depend, and pendency enlarges the window for prior publication — a statutory bar under Section 4 — thereby threatening the novelty on which protection rests. Of 2024–25's applications, 30,349 designs were registered and 167,747 were in force at year-end.³⁶⁵ Enforcement agencies cannot quickly verify registrations against a public record whose reliability pendency undermines.

The Office's preface concedes the source: delayed examiner recruitment "resulted in increased pendency," with 407 new examiners joining only in January 2025.³⁶⁶ The machinery has been modernised — the Designs Rules were amended in January 2021, adding a Start-up category and the Locarno Classification — while the statute itself remains unchanged. The OECD's finding of institutional-capacity weaknesses thus frames the Registry's difficulties: rights are only as effective as the institutions administering them.

³⁶⁴ Office of the Controller General of Patents, Designs and Trade Marks, Annual Report 2024–25 (Government of India, 2025).

³⁶⁵ Office of the Controller General of Patents, Designs and Trade Marks, Annual Report 2024–25 (Government of India, 2025).

³⁶⁶ Office of the Controller General of Patents, Designs and Trade Marks, Annual Report 2024–25 (Government of India, 2025).

CASE LAW ANALYSIS

The case law falls into three clusters, each addressing a different gap: liability, the copyright/design boundary, and procedure. The first shows the substantive bar was settled early and needed no revision since. In *Whirlpool of India Ltd. v. Videocon Industries Ltd.*³⁶⁷ The court confined protection to visible, non-functional features and held that "any person" under Section 22 extends even to a registered proprietor. That fraud need not be proved — piracy being established wherever a copy deceives an average buyer — had already been settled in 1983,³⁶⁸ so *Whirlpool* confirms rather than creates the low substantive bar. The enforcement problem accordingly lies in the remedial framework, not in the test of liability.

The second cluster shows a protection gap the statute itself creates at the copyright boundary. *Dart Industries Inc. v. Techno Plast*³⁶⁹ held copyright unavailable for industrial drawings used in manufacturing, which fall under the Designs Act instead: a designer who fails to register loses both protections, leaving unregistered designs without a remedy. *Cryogas Equipment Pvt. Ltd. v. Inox India Ltd.*³⁷⁰ adopted a "dominant purpose" approach to composite claims, adding useful nuance while leaving the boundary fact-specific. The more-than-fifty-times rule under Copyright Act Section 15 remains contested and faces constitutional challenge before the Delhi High Court.³⁷¹

The third cluster shows a purely procedural question — whether design-infringement and passing-off claims could be pleaded together — took over three decades to resolve, at real cost to litigants.³⁷² In *Crocs Inc. USA v. Bata India Ltd.*³⁷³, a proprietor under validity challenge was left without an effective remedy under either cause of action, because the two claims could not be

³⁶⁷ *Whirlpool of India Ltd. v. Videocon Industries Ltd.*, 2014 (60) PTC 155 (Bom).

³⁶⁸ *Tobu Enterprises v. Megha Enterprises*, 1983 PTC 359 (Del.).

³⁶⁹ *Dart Industries Inc. v. Techno Plast*, 2007 (35) PTC 431 (Del).

³⁷⁰ *Cryogas Equipment Pvt. Ltd. v. Inox India Ltd.*, 2025 INSC 483 (SC).

³⁷¹ Ambika Aggarwal and Anindya Sircar, "Why 50?: 'Industrial Application' Limitation in the Indian Copyright-Design Interface" 19 *Journal of Intellectual Property Law & Practice* 629 (2024).

³⁷² *Micolube India Ltd. v. Rakesh Kumar*, 199 (2013) DLT 740 (FB).

³⁷³ *Crocs Inc. USA v. Bata India Ltd.*, 2019 (78) PTC 1 (Del) (DB).

joined. *Carlsberg Breweries A/S v. Som Distilleries and Breweries Ltd.*³⁷⁴ finally held a composite suit maintainable under CPC Order II Rule 3, a single judge later noting the law "was in a state of flux" until *Carlsberg*.³⁷⁵ Set beside the first cluster, the timeline is instructive: liability was settled by 1983 and merely confirmed in 2014, yet the joinder question *Crocs* exposed was not resolved until 2019 — thirty-six years after liability ceased to be seriously contested, suggesting the delays are statutory and institutional in origin.

CONTEMPORARY DEVELOPMENTS AND GLOBAL PERSPECTIVE

The comparative value of foreign mechanisms lies in selection: some address gaps specific to India's framework and are capable of adaptation; others presuppose institutional capacities India does not presently possess.

Unregistered design protection- Council Regulation No. 6/2002 confers both registered and unregistered Community design protection, the latter arising automatically for three years from first disclosure.³⁷⁶ This is directly relevant to India: industries with short product lifecycles generate designs faster than registration is feasible, leaving unregistered designs open to copying- a gap in the principal Indian study of unregistered design rights documents in these terms.

The 2024 EU reform- Directive 2024/2823 and Regulation 2024/2822 (2024) modernise the EU framework after two decades, broadening the definition of "product", liberalising spare parts, and extending the exclusive right to 3D printing and external transit.³⁷⁷ The significance for India is

³⁷⁴ *Carlsberg Breweries A/S v. Som Distilleries and Breweries Ltd.*, AIR 2019 Del 23 (FB).

³⁷⁵ Vaarad Shende, "Registered Designs as Source Identifiers and Availability of Common Law Remedies during Infringement Proceedings—Exposition of the Law in India" 16 *Journal of Intellectual Property Law & Practice* 801 (2021).

³⁷⁶ Council Regulation (EC) No 6/2002 of 12 December 2001 on Community designs, OJ L 3, 5.1.2002, p. 1; Lisa Puthooparampil and Chahat Abrol, "Need for Unregistered Design Rights in India: A Contemplative Cogitation" 29 *Journal of Intellectual Property Rights* 1 (2023).

³⁷⁷ Directive (EU) 2024/2823 of the European Parliament and of the Council of 23 October 2024 on the legal protection of designs (recast); Regulation (EU) 2024/2822 of the European Parliament and of the Council of 23

direct: extending protection to 3D-printed reproduction addresses the same "industrial process" deficiency in Section 2(d), showing the gap is remediable by amendment.

Design patents and the ITC- US design patents³⁷⁸ (fifteen-year term) are enforceable through courts and the International Trade Commission, supplying the specialised border remedy the 2007 Rules struggle to provide. But an ITC-style tribunal presupposes adjudicative capacity India lacks; strengthening the existing customs route is more realistic.

Functional exclusions and spare parts- *Dyson Ltd. v. Qualtex Ltd.* models a subject the Act ignores: features dictated solely by function attract no protection, and the "must-fit"/"must-match" exceptions require a genuine practical need to copy — public preference alone is not enough.³⁷⁹ A calibrated statutory functional exclusion would replace the case-by-case inquiry *Whirlpool* and *Cryogas* left open.

Fast-moving sectors- In *Karen Millen Fashions Ltd. v. Dunnes Stores*, the CJEU held a design has individual character where its overall impression differs from any single prior design.³⁸⁰ This made unregistered Community protection genuinely enforceable in fast-copying sectors like fashion — a situation India has no mechanism to address.

The Hague System- The Hague System, administered by WIPO, permits design protection across contracting parties through one application. South Korea, the US, Japan and the UK have all joined its Geneva Act recently; India has not, so Indian designers must file separately in every country.

CHALLENGES AND SUGGESTIONS

October 2024 amending Council Regulation (EC) No 6/2002 on Community designs; Arnaud Folliard-Monguiral and David Rogers, "The Legislative Reform's Great Designs" 20 *Journal of Intellectual Property Law & Practice* 300 (2025).

³⁷⁸ US design patents, 35 U.S.C. § 171.

³⁷⁹ *Dyson Ltd. v. Qualtex Ltd.*, [2006] EWCA Civ 166; [2006] RPC 31.

³⁸⁰ *Karen Millen Fashions Ltd. v. Dunnes Stores*, Case C-345/13, ECLI:EU:C:2014:2013 (CJEU, 19 June 2014).

Five reforms follow, in approximate priority. First, introduce criminal liability for commercial-scale design piracy, mirroring Copyright Act Section 63, paired with the procedural safeguards absent from existing criminal regimes — calibration, not comprehensiveness, should govern. Second, revise the Section 22 cap: unrevised since 2000, it bears no proportion to large-scale counterfeit turnover; damages should scale with the infringement, with enhanced awards for repeat offenders, as US profit-based recovery suggests. Third, create a framework for online piracy modelled on the DMCA's notice-and-takedown provisions or the EU Digital Services Act's notice-and-action mechanism, consistent with the knowledge standard fixed in *Shreya Singhal*³⁸¹. Fourth, strengthen the Registry: staffing, infrastructure and a searchable database of registered designs; the 2024–25 filing-examination gap quantifies the need.³⁸² Fifth, accede to the Hague System and consider limited unregistered-design rights on the EU model. Finally, awareness among designers, MSMEs and enforcement agencies remains essential to these reforms taking effect.

CONCLUSION

The Designs Act, 2000 has remained unamended for two-and-a-half decades while comparable jurisdictions, most recently the EU in 2024, have substantially revised their design laws. The chapter's central finding is that India's regime is static: criminal penalties are absent, the INR 50,000 cap has lost its deterrent value, the Act is silent on online infringement and platform liability, India remains outside the Hague System, and the Registry lacks the resources to administer the rights it confers. The case law reinforces the point: the judiciary elaborated a workable test but was left, bench by bench, to resolve remedial questions competent drafting would have foreclosed. Together, these gaps indicate that design rights in India are formally available but practically difficult to vindicate. EU and US experience shows these gaps are remediable: unregistered protection, 3D-printed-reproduction coverage, expedited border remedies and international registration all operate elsewhere. Closing these gaps requires

³⁸¹ *Shreya Singhal v. Union of India*, 2015 AIR SCW 1989

³⁸² Office of the Controller General of Patents, Designs and Trade Marks, Annual Report 2024–25 (Government of India, 2025).

legislative attention and sustained administrative commitment — achievable reforms that India's manufacturing scale makes increasingly necessary.

CHAPTER 10: SUSTAINABILITY, CIRCULAR ECONOMY, AND ECO- DESIGN INNOVATIONS

BY CHARU RAUT

INTRODUCTION

The 21st century has witnessed the dynamic change in the climate, affecting life and health of the people as well as the natural ecosystem and the wilderness³⁸³. Dealing with problems such as extensive production and excessive waste generation could automatically help in restoring the environmental balance. The design of a product determines the material to be used, the technical and operational resources needed, how easily repairable the product will be and whether it will end up as waste in the end or could be used sustainably. Therefore, designing the products sensibly, with due consideration of how it may contribute to the circular economy and preventing the uncontrolled waste production is the need of the hour.

A product's lifecycle is closely linked to its design innovation and operational lifespan both of which influences the environment. Consequently, the role of design has evolved from mere appearance and aesthetics to sustainability, circular economy and innovations that are environmental conscious³⁸⁴.

Imagine a group of young innovators who are deeply considerate for the environment creates an aesthetically appealing lamp which serves both the purpose of a desk lamp and an emergency light during power cuts. The lamp is made from the recycled product waste, is easily repairable and is intended to last longer than other lamps. They decided to protect innovation through law. To their surprise the designers learned that the traditional design protection is more concerned about the visual identity rather than the intelligence used behind sustainability.

³⁸³ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report* (IPCC, Geneva, 2023).

³⁸⁴ World Commission on Environment and Development, *Our Common Future* (Oxford University Press, Oxford, 1987).

This raises an important question: whether existing legal frameworks such as intellectual property rights, design and patent law are adequate and compatible in the present scenario to address the realities of a world where environmental concerns and eco-friendly innovations are a matter of paramount importance.

THE TRANSITION OF DESIGN: AESTHETICS TO SUSTAINABILITY

The Roots of Design Protection

The young innovators looked for the legal protection they could get for their lamp; contrary to this, they discovered that the design law was not made with considering the concepts such as sustainability. To understand why it is hard for sustainable products to fall within the way of protecting designs we need to look at how design law started.

During the Industrial Revolution, people began to make a lot of goods in factories. As more and more goods were being made companies started to compete with each other to sell their products. The companies used designs, patterns and shapes to make their product stand out by focussing on its visual identity. This is the reason why laws were made to stop people from copying these designs without permission. At that time, the main goal of design law was to protect the aesthetic of a product and not to reward people for making useful things.

Therefore, the law was made with the objective that people who made original designs should be protected from others who might copy them. So, design law became a part of the law that deals with intellectual property and it focused on how things look, not how they work.

The way design law developed in the United Kingdom had an influence on how design law works in other countries. The laws in the UK protected the parts of manufactured goods, which encouraged people to be creative and make nice-looking products. This focus on appearance established the idea that design rights protect how something looks, not how it works.

As with time, the design law became more international and this approach was reinforced. The Paris Convention³⁸⁵ for the Protection of Industrial Property which was signed in 1883 said that

³⁸⁵ *Paris Convention for the Protection of Industrial Property*, adopted Mar. 20, 1883, as revised at Stockholm on July 14, 1967, 828 U.N.T.S. 305.

industrial designs are a type of property that should be protected. Later the TRIPS Agreement³⁸⁶ said that countries had to provide protection for new and original industrial designs. Although these agreements made design protection stronger around the world, they still focused on appearance and aesthetics, instead of their functional benefits.

In India, design law is governed by the Designs Act, 2000 which defines a design³⁸⁷ as the features of shape, configuration, pattern, ornament or composition of lines or colours applied to any article. The law also says that these features must "appeal to and are judged by the eye." This reflects the conventional orientation of the design law that under the eye of law the product's aesthetic expressions acts as the principal indicator.

Court decisions have consistently supported this way of thinking. In this case, Bharat Glass Tube Ltd. V. Gopal Glass Works Ltd.,³⁸⁸ The Supreme Court of India said that how something looks is important when deciding whether a design is protected. These decisions depict the importance of how things look under the design law.

For an instance, we may assume that the focus on the visual identity of a product is justifiable but in practical terms, it is not. Those environmentally- conscious young innovators made a sustainable lamp which can be repaired, is durable, uses recycled materials and lasts a long time; all contribute to environmental protection. However, these features are not immediately perceptible through the product's external visual characteristics. This is why the historical foundations of design law show us the roots of a problem that still exists today: while design has changed to include concerns, the laws that govern design protection are still based on an old way of thinking that values appearance, above all else.

The Changing Role of Design

If this innovation of lamp by young innovators would have been developed a century ago, the visual aspect of its design would be considered to be the most important element.

However, in the twenty-first century it presents a completely different reality. Concerns pertaining to climate change, resource depletion, loss of biodiversity, and rising amounts of

³⁸⁶ *Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, arts. 25–26.*

³⁸⁷ *The Designs Act, 2000, s. 2(d).*

³⁸⁸ *Bharat Glass Tube Ltd. v. Gopal Glass Works Ltd., (2008) 10 SCC 657.*

waste have made it necessary to rethink how products are created, produced, and used. In light of the rising environmental problems, design is not considered anymore to be just a means of creating visually appealing designs but rather as an approach that will help sustainably develop.

There is an increased understanding of the issue of environmental problems in the international policy arena as a means of attaining sustainable development

Sustainable Development Goals³⁸⁹ adopted by the United Nations, namely "Industry, Innovation and Infrastructure" (Goal 9), "Responsible Consumption and Production" (Goal 12) and "Climate Action" (Goal 13) emphasize the necessity of sustainable innovation and rational use of resources. These goals have encouraged industries to look for new approaches of production, which are more environmentally friendly, capable of reducing ecological harm throughout a product's lifecycle, instead of the traditional ones.

Thus, the notion of eco-design has become quite relevant in terms of contemporary products. Eco-design aims at reducing the environmental footprint of a product throughout all stages of its lifecycle, starting from the extraction of materials to its manufacturing, usage, and ultimate disposal. Unlike traditional designs that mostly focus on aesthetics and popularity, eco-design involves energy efficiency, durability, reparability, recyclability, and proper choice of materials. In other words, the quality of a product will not only depend on its appearance but also on its interaction with the environment.

Several contemporary businesses have embraced similar approaches. Fairphone³⁹⁰, a Dutch electronics company, has challenged the conventional smartphone industry by developing devices specifically designed for reparability and longevity. Unlike many modern smartphones that are difficult to repair, Fairphone enables users to replace individual components, thereby extending the product's lifespan and reducing electronic waste. Similarly, Patagonia³⁹¹ has promoted sustainable consumption through its repair and reuse initiatives, encouraging consumers to repair products rather than replace them prematurely. The company's philosophy demonstrates that durability itself can constitute a valuable aspect of product design.

³⁸⁹ United Nations General Assembly, *Transforming Our World: The 2030 Agenda for Sustainable Development*, U.N. Doc. A/RES/70/1 (2015).

³⁹⁰ Fairphone, *Impact Report 2023* (Fairphone B.V., Amsterdam, 2023).

³⁹¹ Yvon Chouinard, *Let My People Go Surfing* (Revised edn., Penguin Books, London, 2016).

IKEA³⁹² is one more company that tends to apply the principles of the circular economy in its work through initiatives such as Circular Hub. Instead of treating products as single-use items, the company tries to keep their value for as long as it is possible. It means that today design is not only connected with aesthetics but also with resource efficiency and environmental considerations.

The cases of Fairphone, Patagonia and IKEA show the truth: the most valuable features of current products are environmentally-friendly qualities rather than aesthetics. This shift represents a significant departure from the historical foundations upon which design law was constructed. As the young innovators would soon discover, while design itself has evolved to embrace sustainability, the legal framework governing design protection has not always evolved at the same pace. This creates a fundamental question: can laws developed to protect appearance adequately recognise products whose value lies in durability, repairability and environmental responsibility?

SUSTAINABLE DESIGN AND THE CIRCULAR ECONOMY

Understanding Circular Economy Principles

The young innovators continued to experiment with the environmental importance of their lamp, while doing so, they were introduced to the concept of the circular economy which is now considered a viable way to counter the environmental problems resulting from the way in which modern economies function nowadays. For a very long time, economies have relied on linear patterns of growth which can be defined as "take, make and dispose". This means that nature's resources are exploited, converted into goods which are used until they are eventually disposed of as waste. Although this pattern has driven economic development, it has also caused serious resource depletion and pollution.

In order to address these issues, the concept of the circular economy has been developed with the purpose of reducing wastefulness and increasing efficiency. One of its main advocates has been Walter Stahel³⁹³, who has argued that the life of goods should be prolonged through maintenance

³⁹² Inter IKEA Group, *Sustainability Report FY2023* (Inter IKEA Group, Delft, 2023).

³⁹³ Walter R. Stahel, *The Performance Economy* (2nd edn., Palgrave Macmillan, London, 2010).

and reuse instead of constant replacement. Following the same ideas, the Ellen MacArthur Foundation has promoted the notion of the circular economy as a system based on zero waste, maximum resource reuse and regeneration of nature's systems.

A key concept in the circular economy framework is that of product life extension. Instead of creating disposable goods that will be used only for a brief period and then disposed of, designers are now being urged to make products that are durable, repairable, and can be reused and recycled. This not only cuts down the need for fresh raw materials but also generates less wastage. Efficiency in the utilization of resources thus becomes one of the main goals that must be kept in mind, in order to keep the material's economic value intact for as long as possible.

Thus, such concepts have transformed design from a purely aesthetic exercise into a powerful tool for environmental sustainability.

Design for Circularity

Waste is rarely created at the end of a product's life; more often, it is the result of decisions made at the design stage. The selection of materials, repairability, dismantlability, and recyclability all decide whether the product has been designed in such a way that it aids in protecting the environment or adds to the waste. That is why design is being increasingly seen as the base of the circular economy.

Consequently, design has emerged as the foundation upon which circular economy principles operate. Circular design, unlike the linear model where production, consumption, and disposal of goods are encouraged, aims at ensuring that the products, components and materials are kept within the economy for as long as possible. This is achieved by methods including repairable design, reuse, disassembly and recyclable designs.

Design for repair is one of the most critical features of circular design. Products designed in such a way that damaged parts can be repaired or substituted instead of throwing away the entire product. This makes products durable, reduces waste generation and ensures the conservation of natural resources.

Another concept related to repairable design is design for reuse where products are used several times through reuse instead of replacing them prematurely. Companies such as Patagonia encourage such an approach.

Another significant principle is disassembly design. Products are traditionally put together in such a way that makes their repair and recovery difficult. Circular design, on the other hand, intends to make it easy to disassemble components and repair/recover them when a product reaches its end of life cycle. Walter Stahel, one of the first people who came up with ideas about circular economy, constantly stresses the need to increase the lifetime of the products through their maintenance, repair and remanufacturing.

Designing for recyclability, or making sure that materials will be recovered and reused in future manufacturing processes, is another significant principle. One of the vivid examples here is the cooperation between Adidas and Parley for the Oceans³⁹⁴ which used marine plastic waste to produce sportswear and footwear. It shows how waste can be converted into resources through design with reduced impact on the environment.

This lamp made by young innovators incorporates all these principles. It is repairable which means that it allows to maintain rather than dispose of it, it is made of recycled materials which means recyclability and increased life time. The environmental value of the lamp therefore lies not merely in its appearance but in the sustainable choices embedded within its design. This illustrates a broader reality of contemporary product development: in a circular economy, good design is no longer judged solely by how a product looks, but also by how responsibly it uses and preserves resources.

THE SUSTAINABILITY DILEMMA WITHIN DESIGN PROTECTION

The Visual Bias

It is hardly surprising for the innovators to view through the historical lens of design protection, the philosophy continues to be reflected in the Designs Act, 2000. The problem lies in the fact

³⁹⁴ Adidas AG, *Adidas x Parley: Ending Plastic Waste* (Official Sustainability Initiative).

that sustainability is generally invisible. The consumer may recognize the design of the product right away, but he/she won't necessarily be able to discern if it is sustainable or not. Consequently, many of the characteristics that make a product environmentally valuable fall outside the traditional scope of design protection.

The decision in *Amp Inc. v. Utilux Pty Ltd.*³⁹⁵, illustrates this approach. The court emphasised that design law is concerned with visual appearance rather than purely functional attributes. While this distinction preserves the boundary between design and patent protection, it also exposes a significant gap.

If the lamp's shape, pattern or external configuration is visually distinctive. It may qualify for design protection but not cover the fact that it is eco-friendly. Therefore, although design law may effectively protect what is visually perceived, it does not pay any attention to the foresight with regard to the environment that is built into the product. This is one of the key problems of design protection today.

The Functionality Barrier

The difficulties faced by the young innovators do not end with the visual focus of design law. Even if a sustainable feature is incorporated into a product's design, it may still encounter another obstacle: the functionality barrier.

The law of designs has historically made a distinction between form and functionality. Functional elements that are purely designed to accomplish a technical purpose have been considered ineligible for design protection since such innovations should belong to the category of patent protection. The aforementioned issue was discussed in *DOCERAM GmbH v. CeramTec GmbH*, 2018³⁹⁶, wherein the Court of Justice of the European Union concluded that features determined exclusively by technical functionality cannot be registered as designs.

Despite the fact that such a rule does not allow design law to monopolise technological innovations, it presents a serious difficulty for sustainable products, since many ecologically valuable elements are functional. Recyclability, repairability, modularity and reusability of design elements depend on their functionality and not aesthetic³⁹⁷.

³⁹⁵ *Amp Inc. v. Utilux Pty Ltd.*, [1972] RPC 103 (HL).

³⁹⁶ *DOCERAM GmbH v. CeramTec GmbH*, Case C-395/16, ECLI:EU:C:2018:172 (CJEU, 8 March 2018).

³⁹⁷ Walter R. Stahel, *The Performance Economy* (2nd edn., Palgrave Macmillan, 2010).

The lamp illustrates this dilemma: Its ease of assembly and disassembly are features of functionality rather than aesthetics. Likewise, the same concerns come up when we consider a phone like Fairphone which is designed to be easily repairable and long-lasting.

The functionality barrier therefore exposes a fundamental gap within contemporary design law. The more that a product helps achieve sustainability through repairability, reuse, or resource efficiency, the more likely that the characteristics of that product will be seen as functional, not protectable design. Many innovations that help the environment go unrecognized for this very reason.

BEYOND APPEARANCE

Planned Obsolescence and the Right to Repair

The functionality barrier demonstrates that sustainable characteristics have difficulty getting recognized through existing design law. However, the difficulties sustainable products encounter in regard to design law are not the only ones. Even when products are designed specifically to last long, be repairable and sustainable, contemporary patterns of consumption incentivize replacing them instead of using them for longer periods of time. This problem has become the center of growing interest in planned obsolescence and the right to repair.

Planned obsolescence means designing products in a way that decreases the useful life of those products, thus motivating the purchasers to buy replacements sooner. Even though this strategy may help businesses earn higher profits, it contradicts the principles of sustainability and the circular economy as some products can be repaired, updated, or reused while being thrown away too early.

The environmental impact of this is clearly visible through the issue of e-waste, which has become increasingly prevalent³⁹⁸. The rapid pace at which technology has developed, along with replacement cycles that are increasingly short, has made e-waste one of the most rapidly growing types of waste worldwide. Smartphones, laptops, and home appliances are frequently replaced even when they are still somewhat functioning.

³⁹⁸ United Nations Institute for Training and Research & International Telecommunication Union, *Global E-waste Monitor 2024*.

One such example would be that of the Apple Battery scandal³⁹⁹. Apple received heavy criticism over software updates which decreased the efficiency of some of their older generation iPhones in order to handle issues related to battery deterioration. While it was claimed by the firm that the software updates were meant to ensure that there are no sudden power cuts and for the stability of the device, the case led to an international discussion on the longevity of the product, independence and repairability of electronics devices.

In reaction to these challenges, the Right to Repair initiative has been put forth as an essential element of sustainable consumption. According to this initiative, consumers should be able to access spare parts, repair manuals, diagnostics and technical information in order to repair and maintain their products. Through the promotion of repair over replacement, this initiative aims at prolonging the lifetimes of products, reducing waste production and conserving resources.

Furthermore, issues relating to the intersection between intellectual property protection and repairability have reached the courts as well. For example, in the case of *Brompton Bicycle Ltd. v. Get2Get*⁴⁰⁰, the Court of Justice of the European Union examined the question of protection of the design of a bicycle whose folding system was functional in nature. While this case was related to copyright law, it raised an issue of even wider importance regarding sustainable design; namely, that the protection of the intellectual property right should not unduly constrain the market through limiting the possibility for innovation and utilization of the product.

Realizing the increasing importance of repairable technologies, India has also taken important initiatives for the development of a repair ecosystem in the country. As part of such an initiative, the Department of Consumer Affairs of India has launched the Right to Repair portal in 2022⁴⁰¹ to provide consumers with the information related to the repairing and maintaining of products in sectors such as electronics, automobiles, and consumer durables.

Sustainable Innovation and Patent Protection

³⁹⁹ Apple Inc., *A Message to Our Customers about iPhone Batteries and Performance* (2017).

⁴⁰⁰ *SI, Brompton Bicycle Ltd. v. Chedech (trading as Get2Get)*, Case C-833/18, ECLI:EU:C:2020:461 (CJEU, 11 June 2020).

⁴⁰¹ Department of Consumer Affairs, Government of India, *Right to Repair Portal*.

Initially the young innovators were quite disappointed from the realisation that design law was primarily concerned with visual appearance rather than the environmental intelligence embedded within the product. However, this led them to an important question: if design law could not adequately protect the sustainable features of their lamp, could patent law provide a solution?

The answer depended upon the nature of the innovation itself. Unlike design law, which protects the visual appearance of a product, patent law is concerned with technical inventions. It seeks to reward novel and inventive solutions to practical problems. Thus, while the lamp's external appearance may qualify for protection under the Designs Act, 2000, its underlying technological features, such as an innovative energy-efficient mechanism, a novel rechargeable system or a unique repairable structure may potentially fall within the domain of patent protection.

The distinction between the two regimes is significant. Design rights protect how a product looks, whereas patent rights protect how a product works. For the young innovators, this distinction revealed that sustainability and innovation are not always protected by the same legal framework. The environmental value of their lamp did not arise merely from its appearance but from the technical and functional choices incorporated into its design.

The importance of genuine technical innovation within patent law was emphasised by the Supreme Court of India in *Bishwanath Prasad Radhey Shyam v. Hindustan Metal Industries*⁴⁰². The Court observed that patents are intended to reward true inventions and not merely ordinary improvements that would be obvious to a person skilled in the relevant field. The decision highlights the central objective of patent law: encouraging technological advancement through legal protection.

Similarly, in *Novartis AG v. Union of India*⁴⁰³, the Supreme Court reaffirmed that patent protection should be reserved for inventions that satisfy rigorous standards of novelty and inventiveness. Although the dispute concerned pharmaceutical innovation, the principle remains equally relevant to sustainable technologies. Patent law seeks to reward meaningful innovation while preventing the monopolisation of minor modifications that do not substantially advance existing knowledge.

⁴⁰² *Bishwanath Prasad Radhey Shyam v. Hindustan Metal Industries*, (1979) 2 SCC 511 (SC).

⁴⁰³ *Novartis AG v. Union of India*, (2013) 6 SCC 1 (SC).

With further exploration of their research, they were able to prove that the patent systems in the world have been increasingly applied to cover environmentally friendly innovations. Technologies for renewable energy, waste management, water saving, energy-saving industrial processes have been covered by patents. Thus, these innovations proved that there is a strong link between intellectual property and environmental sustainability.

One such case was the Open Patent Pledge of Tesla⁴⁰⁴. The company realized the necessity to speed up the process of transition to sustainable transport and decided to give others an opportunity to use their patented inventions on good terms. Thus, intellectual property law was used not only to protect inventors, but also to achieve more environmental goals.

The young innovators quickly understood, however, that the patent law was also not the solution to the problem. Consequently, the lamp appeared to occupy an uncertain space between design law and patent law ‘too functional for traditional design protection, yet not always sufficiently inventive for patent protection.’

This realisation exposes the central dilemma of sustainable innovation. While intellectual property law offers separate mechanisms for protecting appearance and technical inventions, many environmentally beneficial products derive their value from characteristics that fall somewhere in between. The challenge therefore lies not in the absence of legal protection altogether, but in ensuring that the law is capable of recognising and rewarding sustainability itself.

DESIGN PROTECTION FOR A SUSTAINABLE FUTURE

Bridging the Gap between Design Rights and Sustainability

The preceding discussion reveals a significant limitation within current intellectual property law. Thus, the problem lies not in the fact that there is no protection at all but rather in the inadequacy of current legislation in terms of recognizing sustainability as innovation.

⁴⁰⁴ Tesla Motors, "All Our Patent Are Belong To You", Official Tesla Blog (12 June 2014), available at: <https://www.tesla.com/blog/all-our-patent-are-belong-you>

Taking into account how important the issues of the environment become today, intellectual property law should also change accordingly. In the modern world, products are not valued solely for their appearance or technical sophistication; they should also be assessed on the basis of environmental sustainability and contribution to the circular economy. A legal framework that overlooks these considerations risks discouraging precisely the kind of innovation needed to address contemporary environmental challenges.

Overcoming such challenges necessitates a shift towards more sustainable design protection. Even though design attractiveness needs to stay a prerequisite, additional value may be accorded to those designs which prove their effectiveness in terms of durability, reparability and efficient use of resources. In this way, it will become possible to realize that “A good design is not only attractive but also responsible”.

At the same time, efforts must be made to promote more repair-friendly legislation. Ensuring stronger right to repair, allowing people easier access to spare parts and promoting the prolongation of products’ lifespan will contribute to bringing IP protection into line with the principles of circular economy. This way, design protection and repairing will complement each other.

Ultimately, the policy makers may consider that there could be an introduction of eco-design incentives⁴⁰⁵ via the use of certifications, fast registration systems or innovations programmes that focus on sustainability. All these will ensure that the designers incorporate sustainability aspects while designing the products without conflicting with the basic tenets of intellectual property rights.

This approach does not seek to override the conventional approach to protecting designs but rather, it seeks to modify it to fit the new times. In times where climate change is defining much of what is happening around us, the most important designs are likely to be those that help sustain our future.

The away Forward

⁴⁰⁵ European Commission, *Directive 2009/125/EC Establishing a Framework for Ecodesign Requirements for Energy-related Products*.

The rise of sustainability implies that the link between intellectual property and environmental protection is bound to keep changing. With governments, businesses, and individuals becoming more and more aware of circular economy approaches, there might even come a need for new legal measures that would take this paradigm into account and move away from the usual approach of valuing appearance and technological advances.

The future systems of product design will definitely pay more attention to such features as durability, efficiency, and reparability. The regulatory projects in different countries already include efforts aimed at making producers manufacture items that last longer, create less waste, and are repairable and reusable. All these trends demonstrate a steady shift from the consumerist approach to products to the responsible attitude.

International institutions might also contribute to this process. Organizations like the World Intellectual Property Organization⁴⁰⁶ already recognize the interlinking of innovation and sustainable development. This gives rise to many possibilities of closer integration of IP legislation with environmental objectives.

On the other hand, the improvements in technology will most certainly bring about a set of challenges as well as opportunities. Innovations in renewable energy⁴⁰⁷, sustainable material science, modular product design, and recycling technology will all keep testing the limits of current IP regimes. In turn, this means that the IP regime needs to be flexible and adaptable enough to encompass novel innovations aimed at protecting the environment.

These developments offer a promising outlook. Even though some aspects of environmental friendliness might go undervalued by the current legal system, the increasing global focus on the concept of the circular economy means that future regimes will probably be able to accommodate such innovations better.

CONCLUSION

⁴⁰⁶ World Intellectual Property Organization, *WIPO GREEN Strategic Plan 2022–2026*.

⁴⁰⁷ International Energy Agency, *Energy Technology Perspectives 2023*.

The journey of the young innovators and their sustainable lamp reflects a broader challenge confronting contemporary intellectual property law. What began as an attempt to protect an environmentally conscious product ultimately showed how limited the current legal protection system is when it comes to recognizing sustainability-driven innovation. Even though the appearance of the lamp could be protected through design legislation and innovative technological solutions could be protected via patenting, many qualities of this innovative product, including repairability, durability and recyclable materials, are not yet sufficiently acknowledged through IP protection.

This chapter has shown that protection of design evolved in history as the means to protect aesthetics and differentiation of products⁴⁰⁸. Nevertheless, in the twenty-first century, the concept of design has been radically transformed. In the era of climate change and scarcity of resources and growing ecological awareness, design is much more than a tool for aesthetic purposes; it became one of the means to drive sustainability and a circular economy.

This aspect was further emphasised as it became clear that sustainable products are characterised by a protection gap. The characteristics that enable the repairability and reusability of the product might be considered functional rather than aesthetic, which means that they lack protection under the design legislation. On the other hand, there are many innovations in the sphere of sustainability that fail to meet the conditions for patentability. Thus, it becomes clear that the products like those of the innovators fall into the grey area between the two systems of protection.

The issue here is not to ignore the classical approaches to design protection but to reconsider them in the current situation. With more and more importance being attached to ecological issues, it is necessary for intellectual property law to evolve to take into account the new approach to innovation that is focused on sustainability and conservation of resources.

⁴⁰⁸ David S. Landes, *The Unbound Prometheus* (2nd edn., Cambridge University Press, 2003).

CHAPTER 11: COMPARATIVE PERSPECTIVES ON DESIGN PROTECTION: INDIA AND GLOBAL JURISDICTIONS

BY GITANSHI PREMCHANDANI

INTRODUCTION

Let us all dive back to 2011, when a question arose regarding the appearance of smartphones. Could their appearance be worthy of billions of dollars? This is the most significant intellectual property dispute, which arose between Apple Inc. and Samsung Electronics over the claim that consumers are influenced beyond product functionality, as visual appearances also captivate them.⁴⁰⁹ Several physical features, such as rounded corners and other graphical user interface elements, were the subject of battles across various jurisdictions, underscoring the value of design alongside functionality in the modern competition. Industrial designs have now been dimensioned above just appearance, as they aid in product differentiation, brand identity, and lead to consumer preferences across several industries, from fashion to electronics.

However, despite the indispensable nature of product designs in safeguarding creativity and preventing unfair imitation, the law often fails to give them the protection they deserve. With the widespread technological lead, which includes innovations such as Artificial Intelligence, three-dimensional (3-D) printing, graphical user interfaces (GUIs), and other forms of virtual products, the existing law tends to be obsolete in granting protection to such designs. Therefore, this opens the path for multiple jurisdictions to widen their ambit of design protection and altogether reconsider the existing jurisprudence. The International Instrument of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) lays down certain standards for design protection,⁴¹⁰ but despite that, countries have their own approach in terms of registering and enforcing such designs. In this light, this chapter examines the existing jurisprudence of design protection in India and other global jurisdictions such as the European

⁴⁰⁹ Apple Inc. v. Samsung Electronics Co., 580 U.S. 53 (2016).

⁴¹⁰ Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), 1869 U.N.T.S. 299, Annex 1C to the Marrakesh Agreement Establishing the World Trade Organization, 1994.

Union, the United States and Japan. It analyses the legal protection principles of industrial design and how these countries incorporate the contemporary challenges of technological advancement. In its entirety, this chapter evaluates the various practices across jurisdictions and proposes certain reforms to enhance the traditional design protection jurisprudence to stay in tandem with the evolving global design.

EVOLVING AND LEGAL FOUNDATIONS OF DESIGN PROTECTION

A. Understanding Industrial Design Protection

The Industrial Designers Society of America (IDSA) defines Industrial Design as the professional practice of designing products, devices, objects, and services used by millions of people around the world every day.⁴¹¹ According to the IDSA, every object around us is a result of the design process, which is aimed at improving lives through well-executed designs.⁴¹² Further, the World Design Organisation at the 29th General Assembly in Gwangju (South Korea) unveiled a renewed definition of industrial design as a strategic problem-solving process that drives innovation, builds business success, and leads to a better quality of life through innovative products, systems, services, and experiences.⁴¹³ Lastly, the World Intellectual Property Organisation (WIPO) defines Industrial Design as the ornamental aspect of an article.⁴¹⁴

Drawing from the definitions of these organisations, we come to an implication that design often serves as the key differentiator, while contributing to brand identity and captivating visual preferences for the consumers. This has transformed the nature of designs from mere ornamental features to generators of substantial commercial and economic value. Even though designs fall under the ambit of intellectual property, they serve a distinct purpose from those of patents, copyrights and trademarks. This distinction becomes crucial as it prevents the overlap between the different intellectual properties and assists in classifying and granting them protection as per their scope and nature.

⁴¹¹ Industrial Designers Society of America, *What is Industrial Design?*, available at: <https://www.idsa.org/what-industrial-design> (last visited June 25, 2026).

⁴¹² Industrial Designers Society of America, *What is Industrial Design?*, available at: <https://www.idsa.org/what-industrial-design> (last visited June 25, 2026).

⁴¹³ World Design Organization, *Definition of Industrial Design*, available at: <https://wdo.org/about/definition> (last visited June 25, 2026).

⁴¹⁴ World Intellectual Property Organization, *Industrial Designs*, available at: <https://www.wipo.int/designs/en/> (last visited June 25, 2026).

B. International Framework Governing Design Protection

Since every country has its jurisdiction over design laws and other intellectual property, at times, the need for a harmonised industrial design law arises due to the intense integration of global markets. For these situations, there exists the international framework of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which lays down the minimum requirements that the member states of the World Trade Organisation (WTO) must adhere to and implement in terms of their intellectual property laws. Section 4 of the TRIPS Agreement⁴¹⁵ deals with the requirements for protection, wherein Articles 25 and 26 require the member states to extend protection to the independently created designs which are novel, and to grant them exclusive rights against unfair commercial use, and the duration of protection available shall amount to at least 10 years.⁴¹⁶

Alongside the TRIPS framework, there also exists the Hague System for the International Registration of Industrial Designs, which is administered by the World Intellectual Property Organisation (WIPO).⁴¹⁷ This system offers the owner of an industrial design a means of obtaining protection in several countries by filing one application in one language, with one set of fees in one currency.⁴¹⁸ Although major examination is subjected to the domestic laws of the home country, this system showcases a broader international trend towards harmonisation and accessibility for designers in the global markets. Additionally, for easier identification of different industrial designs for their registration, the Locarno Agreement in 1968 established the Locarno Classification to classify the designs.⁴¹⁹

The aforementioned instruments prove the significance of international design protection, as it is characterised by increasing globalisation and rapid technological growth. Since there are multiple cross-border transactions, growing companies and enterprises demand legal certainty for the protection of their designs and the rights which are associated with their designs. Hence,

⁴¹⁵ Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), Part II, Section 4, Arts. 25–26.

⁴¹⁶ Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), Arts. 25 & 26.

⁴¹⁷ World Intellectual Property Organization, *The Hague System for the International Registration of Industrial Designs*, available at: <https://www.wipo.int/hague/en/> (last visited June 25, 2026).

⁴¹⁸ World Intellectual Property Organization, *The Hague System for the International Registration of Industrial Designs*, available at: <https://www.wipo.int/hague/en/> (last visited June 25, 2026).

⁴¹⁹ Locarno Agreement Establishing an International Classification for Industrial Designs, Sept. 8, 1968, 828 U.N.T.S. 389.

this puts forth a need for an enhanced and robust international system that is harmonised and uniform across all jurisdictions, leaving no ground for disputes and unfair imitation.

C. Evolution of Design Protection in India

The earliest known legislation for design protection in India, which was the Designs Act of 1911, existed from the colonial period and reflected the intellectual property realities of that period.⁴²⁰ With Independence and the 1991 reforms, this statute became obsolete due to its inability to address the growing technology and India's entrance into the international trade arena, despite providing the basic framework for design registration and enforcement.⁴²¹ Due to these reasons, as well as to reform and catch up with the growing trends, India's statutory framework with regard to design protection has undergone major legislative changes.

Now, India, being a WTO member state, had to fulfil the obligations of the TRIPS Agreement; hence, in tandem with that, the Parliament in the year 2000 enacted the Designs Act.⁴²² This act widened the scope of designs that could come under the umbrella of legal protection, simplified the process of registrations, and granted exclusive rights over novel and unique designs. Section 2(d) of this legislation defines design as "any features of shape, configuration, pattern, ornament, or composition of lines or colours applied to any article, whether in two-dimensional, three-dimensional, or both forms, by any industrial process or means that appeals to the eye and can be judged by the eye."⁴²³

Further, the Design Act also provides for certain requirements that are to be fulfilled before the registration of the design. The design needs to be novel and original and cannot be a mere imitation or derivation from an existing design. To substantiate this, let's look into the case of B.Chawla & Sons vs Bright Auto Industries, where the dispute was regarding the infringement of a registered design of an automobile component. Here, the plaintiff contended the exclusivity of the registered design, while the defendant claimed that the design wasn't novel and was a mere variation of the prevailing designs in the market. To this, the Delhi High Court held that to

⁴²⁰ The Designs Act, 1911 (Act No. II of 1911).

⁴²¹ Ministry of Commerce and Industry, Government of India, *Statement of Objects and Reasons, The Designs Bill, 1999*, Bill No. 58 of 1999.

⁴²² The Designs Act, 2000 (Act No. 16 of 2000).

⁴²³ The Designs Act, 2000, s. 2(d).

qualify for design protection, the designs need to be original and novel and not a product of variations and modifications.⁴²⁴

Additionally, Section 11 of the Act extends exclusive rights to the registered proprietor (copyright) over a registered design for an initial period of ten years from the date of registration. Further, upon application to the Controller, alongside the payment of the designated fee, the protection may be extended to another five years, provided the procedure is completed before the expiry of the initial term, making the maximum duration of protection to be fifteen years.⁴²⁵ Despite these legislative reforms, the act at times fails to keep up with the recent trends, which highlights the need for a framework that addresses the increasing technological and commercial realities of the global design market. Hence, it also becomes crucial to analyse the nature of design protection in other jurisdictions, to understand their evolution in terms of expanding technology.

COMPARATIVE ANALYSIS OF DESIGN PROTECTION ACROSS JURISDICTIONS

Registrability Standards: Balancing Innovation and Competition

The entry threshold for industrial design protection is the core cornerstone of all design legal systems. A threshold set too low will give rise to monopoly rights over trivial designs, while an excessively high threshold will strip original creative achievements of their eligibility for protection. Jurisdictions across the globe all strive to strike a precise balance between incentivising aesthetic innovation and safeguarding market competition. This study finds that India, the European Union, the United States, and Japan have significantly different standards for assessing the novelty and originality of industrial designs.

As already mentioned above, with the case of *B. Chawla & Sons v. Bright Auto Industries*, it was held that insignificant modifications or routine alterations made to known designs cannot satisfy the statutory requirement of novelty.⁴²⁶ The Supreme Court further expanded on this principle in

⁴²⁴ *B. Chawla & Sons v. Bright Auto Industries*, AIR 1981 Del 95.

⁴²⁵ The Designs Act, 2000, s. 11.

⁴²⁶ *B. Chawla & Sons v. Bright Auto Industries*, AIR 1981 Del 95.

the case of *Bharat Glass Tube Ltd. v. Gopal Glass Works Ltd.*, where the dispute involved the protection of a registered design of glass sheets, on the ground of prior publication. The court here held that the novelty of a design would be lost only when the design is subjected to sufficient public disclosure before the initial registration. In furtherance of this, the Court also held that novelty should be assessed in its entirety and not based on isolated features.⁴²⁷ These decisions established a threshold in determining India's registrability standards.

This issue became global in the case of *Crocs Inc. USA v. Aqualite India Ltd.*, in which the validity of the registered footwear designs of Crocs was contested on the ground that the designs became published in foreign patents, websites, and catalogues before registration in India. The Delhi High Court ruled that prior publication has been satisfied by the publication in any publicly accessible digital platform within the meaning of the Definitions clause in the Designs Act.⁴²⁸ The decision is in line with the digital marketplace, in which location does not dictate publicity. Concurrently, it increases the burden on the applicant in that they have to provide proof of the novelty of their invention before applying for it in India.

The European Union has a somewhat liberal standard as compared to the Indian standard, with a focus on novelty and originality. If the design were created before, the Community Design Regulation requires it to have an individual character such that "its overall impression on the informed user would be different from that made by any prior design". This extra criterion will stop the registration of designs that may be technically new but visually similar to existing designs. This standard was put into practice in the Court of Justice of the European Union's case *PepsiCo Inc. v. Grupo Promer Mon Graphic SA*, which determined that the standard for infringement and for validity should be interpreted from the point of view of an "informed user," who knows about existing designs but is not an expert.⁴²⁹ The EU is introducing this intermediate standard to make sure that only designs that are truly 'visually distinct' can be protected.

The United States of America has a much stricter standard, with its protection of industrial designs in its design patent system. In addition to novelty and originality, the applicant must show that the design is ornamental and not obvious, meaning that if it is just a modification of an

⁴²⁷ *Bharat Glass Tube Ltd. v. Gopal Glass Works Ltd.*, (2008) 10 SCC 657.

⁴²⁸ *Crocs Inc. USA v. Aqualite India Ltd.*, 2019 SCC OnLine Del 8256.

⁴²⁹ *PepsiCo Inc. v. Grupo Promer Mon Graphic SA*, Case C-281/10 P, ECLI:EU:C:2011:679 (Court of Justice of the European Union)

existing product, the design is of no novelty. The increased threshold refers to the patent-oriented nature of the American system, which requires more demanding thresholds for patent protection, but in return provides more patent rights.⁴³⁰ In contrast, the Indian regime does not require a non-obviousness requirement and, thus, may have a lower threshold to grant registration.

Perhaps Japan has the most well-balanced system, incorporating aspects of the European and American systems. Under the Japanese Design Act, a design must be new and have creative difficulty; that is, the design must not be readily conceived by a person of ordinary skill in the art, based on existing designs.⁴³¹ Like in India, a prior public disclosure ordinarily would render a work non-novel unless it is within the statutory grace period. Japanese examination, however, is much more concerned with the overall aesthetic uniqueness of design, acknowledging at the same time the business requirements of industrial manufacture and production. The position taken is to ensure that only protectable designs add value for the enhancement of visual innovation and not unduly inhibit the legitimate competition.

If a comparative assessment is done, it can be seen that in the four jurisdictions, the prevention of the registration of commonplace or previously known designs has varying thresholds to achieve the objective. The novelty or originality requirements broadly meet the minimum standards established by the TRIPS Agreement, but Indian law is comparatively conservative because it lacks characteristics of novelty and originality concepts, as well as recognition of digital and partial designs. The EU, on the other hand, demands "visual distinctiveness", whilst the US follows a "patent-like" criterion of inventiveness, and Japan has updated their legislation to accommodate new design expressions. While maintaining the balance between innovation, competition and consumer welfare, as industrial innovation moves beyond production of goods, the design regime in India needs to be more flexible and technologically agile.

Scope of Protection and Judicial Interpretation: A Comparative Perspective

The grant of registration is not the end, but the starting point for legal protection of an industrial design. After you register a design, perhaps the more important issue is how much protection you are entitled to and how courts will judge whether you are infringing upon those rights. Although it is clear that all jurisdictions protect registered proprietors against the unauthorised commercial

⁴³⁰ 35 U.S.C. §§ 171–173 (United States Design Patent Act).

⁴³¹ Design Act (Japan), Act No. 125 of 1959, as amended.

use of their designs, there are significant variations between them in how infringement is determined and in the extent of protection available for registered designs.

In India, a registered design is a registered right to the registered proprietor, which enables him/her to use the registered design on the registered article for the use in the class of article to which the design is registered and to prevent others from using the design without permission. Unauthorised use is covered by Section 22 of the Act, which considers it to be a form of pirating a registered design and offers civil remedies, such as injunctions and damages.⁴³² The Act, however, does not give a detailed test for infringement, which to a great extent remains to be interpreted by the judiciary.

The Delhi High Court has spoken about the scope of these rights in *Mohan Lal vs Sona Paint & Hardwares*. The case involved the alleged infringement of a registered design of a registered number about decorative articles, in which the plaintiff also pursued claims for passing off and design infringement. The Court noted that both actions stem from the same facts but have different legal interests. Design infringement protects the monopoly rights conferred by the Designs Act, and passing off protects the goodwill and reputation of a product on the market. The ruling indicated that there was no trademark right granted to the registrants and that goodwill was not a substitute for the requirements for design infringement. By doing so, the Court upheld design rights as rights of their own but also gave them commercial value.⁴³³

The European Union has taken a more advanced approach in the area of judicial frameworks. The Court of Justice of the European Union in *DOCERAM GmbH v CeramTec GmbH*, considered whether features determined by technical function could be considered protected features under the design directive.⁴³⁴ For the Court, protection is gone if the appearance of the product is solely driven by technical considerations and alternatives are available. The judgment confirmed that the purpose of industrial design law is to reward the aesthetic rather than the technical aspect of invention and provided a clear and consistent framework around the implications of distinguishing between aesthetic and functional features.

⁴³² The Designs Act, 2000, s. 22.

⁴³³ *Mohan Lal v. Sona Paint & Hardwares*, 2013 SCC OnLine Del 1980.

⁴³⁴ *DOCERAM GmbH v. CeramTec GmbH*, Case C-395/16, ECLI:EU:C:2018:172 (Court of Justice of the European Union).

The United States has a different solution, called the design patent system. The Court of Appeals for the Federal Circuit rejected the earlier "point of novelty" doctrine and reaffirmed the ordinary observer test as the test for infringement in *Egyptian Goddess Inc. v. Swisa Inc.*⁴³⁵ The infringement is found when the ordinary purchaser of the accused product, who is knowledgeable of the prior art, would find the two designs substantially similar, according to the Court. The judgment emphasised the broader similarity of the products, rather than the specific similarities, and facilitated analysis of the infringement issue, making judicial decisions more similar to consumer perception of the products.

The commercial usefulness of these principles was seen in the case of *Apple Inc. v. Samsung Electronics Co.*, as one of the most important industrial designs that occurred in the past few decades. Apple claimed that the Samsung design was based on the look of the iPhone's front face, its rounded corners, bezel layout and graphical user interface. The litigation showed that industrial design rights are not only for products totally decorative but also have a pivotal role in the protection of the visual identity in technology-based marketplaces. It also showed that, in cases where the appearance of a product is a major determining factor in the consumer's decision to buy, significant monetary damages can be recovered.⁴³⁶

The same goes for Japan; the sole right to commercially use the protected design and prevent third parties from doing so is reserved for the registered proprietor. The Japanese Design Act provides protection not only for exact replication but also for designs that give a substantially similar effect to the viewer.⁴³⁷ Japanese courts thus give great weight to the general impression of the competing goods, regardless of differences in features. This wider assessment takes into account the aim of the registered design to prevent competitors from exploiting the essential visual characteristics of the registered design by making minor changes that do not change the aesthetic impression of the design.

While the Indian design regime is still primarily based on judicial interpretation, the E.U. and U.S. have more rigid standards for infringement that focus on whether the overall impression of the observer or user is confused. Japan takes a comparable integrated view, considering the significant resemblances among competing designs in terms of dimensions. These changes point

⁴³⁵ *Egyptian Goddess Inc. v. Swisa Inc.*, 543 F.3d 665 (Fed. Cir. 2008).

⁴³⁶ *Apple Inc. v. Samsung Electronics Co.*, 580 U.S. 53 (2016).

⁴³⁷ Design Act (Japan), Act No. 125 of 1959, arts. 23–37 (as amended).

to a convergence towards a more consumer-focused assessment, as this becomes based less on the mechanical comparison of each element and more on the general aesthetic impression created by the design as a whole.

Overlapping Protection: The Interface Between Design, Copyright, and Trademark Law

Given the growing importance of the commercial appearance of products, there is often crossover between industrial designs and other types of IP, particularly copyright and trademark law. A design of a single product could be an expression of art, an identifier of a source and a registered design at the same time. Such overlapping protection is a benefit for the rights holder but is also of concern in terms of potential long-term monopolisation, and the public domain getting squeezed. In response, there have been a variety of responses by jurisdictions as to how to control the concurrent existence of these rights.

Overlap between the copyright and design law in India is primarily provided in the Copyright Act, 1957, namely Section 15, which states that an industrially applied artistic work ceases to be covered by copyright protection as soon as it becomes eligible for registration under the Designs Act, 2000.⁴³⁸ This was explored in the case of *Microfibres Inc. v. Girdhar & Co.* where the Delhi High Court held that “artistic works which are created through an industrial process” fall within the ambit of the Designs Act and not under the Copyright Act. The Court made clear that copyright is not intended to circumvent the limited term of protection provided by the design legislation, and hence the balance between creativity and competition in the legislation should be maintained.⁴³⁹

Design rights and trademark law have similarly been a source of judicial controversy. Delhi High Court in *Carlsberg Breweries A/S v. Som Distilleries & Breweries Ltd.* held: Design infringement and passing off are under two separate legal regimes, but can be tried together, provided facts warrant it. The decision said that the aesthetics of a product can at the same time fulfil the requirements of a protected industrial design and act as a means of commercial origin as long as the requirements of the two legal regimes are fulfilled separately.⁴⁴⁰

⁴³⁸ The Copyright Act, 1957 (Act No. 14 of 1957), s. 15.

⁴³⁹ *Microfibres Inc. v. Girdhar & Co.*, 2006 SCC OnLine Del 646 : (2009) 40 PTC 519 (Del).

⁴⁴⁰ *Carlsberg Breweries A/S v. Som Distilleries & Breweries Ltd.*, 2018 SCC OnLine Del 12912 : (2019) 76 PTC 12 (Del) (FB).

In the European Union, a relatively wider perspective has been taken. In *Cofemel – Sociedade de Vestuário SA v. G-Star Raw CV*, the Court of Justice of the European Union (CJEU) said that an industrial design can be protected by copyright law as being original, even when it meets the originality requirement on its own merits.⁴⁴¹ The European system allows for a "cumulative" protection of the design, which means that stronger protection can be given to the designer and at the same time, there are concerns about extended protection.

The European Union, while committed to allowing "necessary" concurrent protection where the statutory conditions of the various IP regimes are met, is somewhat more open than India, where overlapping monopolies are seen as undesirable. But because product design is increasingly contributing to brand identity and commercial value, there will be a continuing challenge to establish a clear dividing line between various types of protection for IP rights by both lawmakers and courts.

CHALLENGES AND SUGGESTIONS: THE ROAD AHEAD

Technology has grown and advanced so rapidly that many of the traditional laws of industrial design have proven inadequate. New technologies and innovations like graphical user interfaces (GUIs), artificial intelligence (AI), digital products and 3D printing put into question the existing legal protection of tangible industrial articles. Current legislation needs to be adapted to ensure that it continues to be effective as the scope of product design is increasingly digital.

One of the primary challenges is the protection of digital and virtual designs. Modern products derive much of their commercial value from software interfaces and digital aesthetics rather than physical appearance alone. While jurisdictions such as Japan have expanded protection through the 2019 amendments to the Design Act, extending protection to GUIs, digital images, and building interiors,⁴⁴² India's Designs Act, 2000, continues to focus primarily on physical articles.⁴⁴³ This creates uncertainty for designers developing software-based products and other digital innovations.

⁴⁴¹ *Cofemel – Sociedade de Vestuário SA v. G-Star Raw CV*, Case C-683/17, ECLI:EU:C:2019:721 (Court of Justice of the European Union).

⁴⁴² Japan Patent Office, *Outline of the 2019 Amendments to the Design Act*, available at <https://www.jpo.go.jp/e/system/laws/rule/guideline/design/index.html> (last visited June 25, 2026).

⁴⁴³ The Designs Act, 2000 (Act No. 16 of 2000).

Another challenge is the rise of AI usage in the design of products. AI-generated designs are becoming more and more creative and innovative, and the current design laws do not address who is the creator of the thing, nor does it clarify who owns its intellectual property rights. Likewise, 3D printing also allows for quick and cost-effective infringement of protected designs, while making enforcement more difficult, especially in cross-border digital markets.

To resolve these issues, it would be prudent to look towards a technology-based solution to the issue of industrial design protection in India. Allowing for a wider scope of statutory protection for digital designs and GUI and clarity on AI-generated designs, as well as robust enforcement for digital infringement, would better meet the realities of the modern commercial world in India. The progressive design regime already in place in other countries like Japan and the European Union can be replicated in India, which will enable India's design regime to modernise and also improve its competitiveness in the global innovation ecosystem.

The EU's recent design reforms have extended the protection to digital and non physical designs as well. At the same time Japan provides protection of graphic image designs, including GUIs its recognition of partial designs, and its related design system for protecting successive variations of a basic design. India could incorporate these features, which would enable India's design law to deal with the digital commerce and growing technologies.

CONCLUSION

In a nutshell, the importance of industrial design protection to an economy of innovation, fair competition and the protection of the market value of the aesthetic appearance of the product is crucial. Although India has embraced the international approach, other jurisdictions like the European Union, the United States and Japan have taken a more liberal stance toward the emerging technological and commercial realities as the comparative study illustrates. A reform of the design regime has the potential of making India design-friendly and more competitive in a global economy that is deeply dependent on innovations, including digital and emerging technologies, in addition to safeguarding the rights of designers.

Part III –

Trade Secrets in the Data and Innovation

Economy

CHAPTER 12: TRADE SECRETS AS STRATEGIC ASSETS IN THE KNOWLEDGE ECONOMY

BY JUELL DEBBARMA AND ZEESHAN RAHMAN

INTRODUCTION

Today, information is the most valued possession of an individual or any business firm.⁴⁴⁴ The value of any business used to be determined by the land it occupies, machines available to it, and natural resources in the form of minerals. Today, however, information about processes or systems that competitors are unaware of becomes the source of value for a company.⁴⁴⁵

It comes out from the people within the business and hence becomes invaluable. For any company to be able to duplicate the kind of information it has, will be very costly. Thus, this information is always safeguarded as trade secrets. This kind of information has become the most important one in modern times.

Trade secrets are information which is commercially valuable because it is secret, and is the subject of reasonable efforts to keep it secret.⁴⁴⁶ In other forms of intellectual property, trade secrets do not have to be registered and do not have a limited term of protection. Industries that rely on innovation and technology, pharmaceuticals, manufacturing, finance, and artificial intelligence often protect the information they develop as trade secrets.⁴⁴⁷

In the light of the rise in the portion of the economy that is knowledge-based, the need for trade secrets as a means for fostering innovation and competition alike grows ever greater.⁴⁴⁸ Information that is confidential and safeguarded by the company may have great value for the

⁴⁴⁴ Brian T. Yeh, *Protection of Trade Secrets: Overview of Current Law and Legislation* 1-2 (Congressional Research Service, 2014).

⁴⁴⁵ William F. Crittenden, Victoria L. Crittenden & Allison Pierpont, "Trade Secrets: Managerial Guidance for Competitive Advantage", *Business Horizons* (2015).

⁴⁴⁶ World Intellectual Property Organization, *Overview of National and Regional Trade Secret Systems: India* 1 (2024).

⁴⁴⁷ David S. Almeling, "Seven Reasons Why Trade Secrets Are Increasingly Important", 27 *Berkeley Technology Law Journal* 1091 (2012).

⁴⁴⁸ Radauer, Searle & Bader, *The Possibilities and Limits of Trade Secrets to Protect Data Shared Between Firms* (2023).

company and pose a danger to it simultaneously, once it gets into the hands of some other company or gets released to the general public. In connection with the growing digital nature of corporate operations, value-added networks across the globe, mobility of the workforce from one company to another, and, finally, cyber crimes, the matter of protecting trade secrets has become more complex than before.⁴⁴⁹

This paper provides a comprehensive analysis on the concept of trade secrets, its significance in the knowledge economy and how it is becoming more and more important. It will cover the legal framework governing the protection of trade secrets, the contribution it makes towards promoting innovation and economic growth, the difficulties involved in protecting confidential information and the changing legal and policy approach that is needed to strike a balance between protection of trade secrets and fair competition to enable development of technology.

HISTORICAL EVOLUTION

World

The concept of trade secrets is one of the oldest methods of protecting business information⁴⁵⁰ of value and was protected long before the intellectual property laws that we know today were introduced. It was the method of choice for centuries for merchants, artisans and craftsmen who possessed valuable knowledge which provided them with a competitive edge. The knowledge and skills were passed down from generation to generation and often only shared with in the family or to a selected group of apprentices⁴⁵¹ in order to prevent the competitor from gaining access to the information.

Trade secrets have been used for centuries by merchants, artisans, craftsmen and others to protect valuable knowledge. During the Middle Age, trade secrets were often maintained by trade guilds.⁴⁵² Members of a trade guild were expected to maintain secrecy with respect to the

⁴⁴⁹ John G. Sprankling, *Trade Secrets in the Artificial Intelligence Era* (2024).

⁴⁵⁰ Lionel Bently, "Patents and Trade Secrets in England: The Case of *Newbery v. James* (1817)", in *The Harmonization and Protection of Trade Secrets in the EU* (Edward Elgar Publishing).

⁴⁵¹ Lionel Bently, 'Patents and Trade Secrets in England: The Case of *Newbery v James* (1817)' in Jens Schovsbo, Timo Minssen and Thomas Riis (eds), *The Harmonization and Protection of Trade Secrets in the EU* (Edward Elgar Publishing 2020).

⁴⁵² Amy Kapczynski, "The Public History of Trade Secrets", 55 *University of California Davis Law Review* 1367 (2022).

manufacturing processes and other commercial knowledge of the guild. Breach of such secrecy was often severely punished.

With the advent of the Industrial Revolution, the protection of trade secrets rose in importance⁴⁵³ as more and more industries developed and new technologies were created. Confidentiality of methods and secrets of trade became even more valuable and more businesses began to rely on the law to protect them against unfair use by competitors. Some of the earliest cases of breaches of confidence were heard by the courts at this time and provided the beginnings of legal protection for the protection of trade secrets.

In the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) which is administered by the World Trade Organization, trade secrets are now receiving the international recognition they deserve. Information that has been kept unpublished will be protected against unfair competition by undisclosed information. Such information is an essential component of the Intellectual Property rights in the global knowledge economy, where it will be used to protect both a company's innovation and its business strategy as well as other secrets that are important to that company's development. Although, Article 39 of TRIPS Agreement⁴⁵⁴ defined trade secrets and attempted to establish a uniform international standard for protection of undisclosed information, potential business assets. However, there remains a vast difference in the manner in which nations implement trade secrets protection. As a result, companies or enterprises find it difficult in cross-border enforcement of such rights.

India

The concept of trade secrets is as old as the growth of the commercial and the industrial activity in the country. In ancient India, it was the practice of the skilled craftsmen-like the weavers and the metal workers, the vaidyas or the physicians, the agriculturists and the architects, to keep secret the knowledge so gained by them. The techniques and methods of making the various textiles, of working in the metals, of preparing the medicines in accordance with the ancient scriptures like the Ayur Vedas, of cultivating the crops and of constructing buildings, were all passed down from generation to generation, within the families of these skilled craftsmen. The

⁴⁵³ Lionel Bently, 'Patents and Trade Secrets in England: The Case of *Newbery v James* (1817)' in Jens Schovsbo, Timo Minssen and Thomas Riis (eds), *The Harmonization and Protection of Trade Secrets in the EU* (Edward Elgar Publishing 2020).

⁴⁵⁴ Agreement on Trade Related Aspects of Intellectual Property Rights, 1994, Art. 39.

knowledge was passed on by the father to the son, and even the intimate family members and the selected apprentices were not made aware of the secrets, and this was done to keep them from being divulged. In the absence of any legal protection of trade secrets, the confidence was reposed in the customs of the community and in the professional ethics of the individuals. The artisans and the merchants and the other skilled persons of the country did manage to preserve their competitive edge and also to keep their traditional knowledge secret and prevent it from getting into public domain.⁴⁵⁵

Protection of confidential business information, including trade secrets in pre-independence India did not have the good fortune of having a law to itself. It was protected largely by English common law principles⁴⁵⁶ and in particular, the equitable doctrine of breach of confidence. It was a period when most confidential information were protected by means of secret contracts entered into by the parties concerned and those who were required to be entrusted with such confidential information were made to promise in writing to maintain secrecy and confidentiality and in such cases, the said individuals were required to observe fiduciary duties towards the owner of such information. As and when disputes arose, regarding secret information of commercial nature, Indian Courts held those to be breach of confidence cases and came to their own conclusions on the facts of each case.

With India gaining independence followed by rapid industrialization, globalization and economic liberalization, the concept of trade secrets has assumed importance with growth of various industries such as pharmaceuticals, information technology, biotechnology and manufacturing. Even though laws have been enacted to regulate patents, trademarks, copyrights and industrial designs in India, no specific legislation has been enacted to regulate trade secrets.⁴⁵⁷ Instead, the trade secrets find protection in the provisions of the Indian Contract Act, 1872 and the equitable principles which are applied by the courts in commercial disputes while deciding cases relating to confidential information.

With India becoming a part of the TRIPS Agreement, 1994 (Article 39), undisclosed information relating to trade secrets is required to be protected against unfair competition.⁴⁵⁸ Protection of

⁴⁵⁵ Deepa Varadarajan, *A Trade Secret Approach to Protecting Traditional Knowledge*.

⁴⁵⁶ Muthukumar C., "A Study on Evolving Protection of Trade Secrets in India", 1 Sai Sindhu International Journal of Research 7 (2025).

⁴⁵⁷ World Intellectual Property Organization, *Overview of National and Regional Trade Secret Systems: India* 1 (2024).

⁴⁵⁸ Agreement on Trade Related Aspects of Intellectual Property Rights, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 UNTS 299, art 39.

trade secrets has thus become crucial to enable entrepreneurs to protect their intellectual property and compete in the rapidly growing knowledge-based economy.

COMPARATIVE STUDY

India

Trade Secrets have become an integral part of the business strategies followed by various companies in India. Trade secrets may take the form of technical know-how, manufacturing processes, computer programs, customer lists and business strategies. Trade secrets have been of great importance in the knowledge economy of the Indian economy as a whole, and in particular to the IT, pharmaceuticals, biotechnology and other manufacturing industries. Trade secrets are protected under the Indian Contract Act, 1872, and other equitable doctrines.⁴⁵⁹ Undisclosed information is also protected under Article 39 of the TRIPS Agreement, 1994. Breach of confidence is one of the many causes of action that Indian courts have consistently used to protect confidential commercial information. The Delhi High Court's verdicts in *John Richard Brady v. Chemical Process Equipments Pvt. Ltd.*⁴⁶⁰ (1987) and *American Express Bank Ltd. v. Priya Puri*⁴⁶¹ (2006) who recognized the commercial value of information, transformed trade secrets into instruments of competitive advantage⁴⁶² in India's knowledge-based economy.

United States

The trade secret is seen as an important calculated technology and economic asset for innovation, technology transfer, and economic development for the United States, one that allows companies to protect their algorithms, source codes, technical research data, manufacturing and service processes,⁴⁶³ and other types of business strategies and practices. Trade secrets law is mainly codified by the 1979 Uniform Trade Secrets Act,⁴⁶⁴ which has been

⁴⁵⁹ Aruno Raj Singh, 'Concept of Trade Secrets in India' (2021) *International Journal of Law Management and Humanities*.

⁴⁶⁰ *John Richard Brady v Chemical Process Equipments Pvt Ltd*, 1987 SCC OnLine Del 17.

⁴⁶¹ *American Express Bank Ltd. v. Priya Puri* (2006) III LLJ 540 DEL.

⁴⁶² William F. Crittenden, Victoria L. Crittenden & Allison Pierpont, "Trade Secrets: Managerial Guidance for Competitive Advantage", *Business Horizons* (2015).

⁴⁶³ David S Almeling, 'Seven Reasons Why Trade Secrets Are Increasingly Important' (2012) 27 *Berkeley Technology Law Journal* 1091.

⁴⁶⁴ Brian T. Yeh, *Protection of Trade Secrets: Overview of Current Law and Legislation* 6-8 (Congressional Research Service, 2014).

adopted by most of the States, and the 2016 Defend Trade Secrets Act⁴⁶⁵, which created a federal cause of action for trade secret misappropriation. The importance of trade secrets to the general welfare has been demonstrated by the U.S. Supreme Court's decisions in *Kewanee Oil Co. v. Bicron Corp.*⁴⁶⁶ (1974) and *Ruckelshaus v. Monsanto Co.*⁴⁶⁷ (1984), which treated trade secrets as property rights. These laws and legal rulings have made trade secrets a foundation of the knowledge-based economy in the United States.

United Kingdom

Trade secrets are defined in UK law as confidential information which comes from a commercial enterprise and provides that enterprise with a competitive advantage. UK companies rely on trade secrets and confidential business information to protect their manufacturing processes, technical information and customer and commercial information. Before the Trade Secrets (Enforcement, etc) Regulations 2018 entered into force,⁴⁶⁸ protection was available at common law under the doctrine of breach of confidence. The Regulations implemented Directive (EU) 2016/943⁴⁶⁹ in the UK. Judicial interpretation has continued to develop the law, notably in *Coco v. A.N. Clark (Engineers) Ltd.*⁴⁷⁰ (1969), which settled the elements of breach of confidence, and *Faccenda Chicken Ltd. v. Fowler*⁴⁷¹ (1987), which decided when an employer would lose the benefit of maintaining secret information, thereby improving innovation and market competition in the UK knowledge economy.⁴⁷²

European Union (EU)

Trade secrets are expressly recognized as part of the knowledge economy in the Trade Secret Directive of the European Union⁴⁷³ as a type of calculated intellectual property rights to promote

⁴⁶⁵ Brian T Yeh, *Protection of Trade Secrets: Overview of Current Law and Legislation* (Congressional Research Service 2014) 6–8.

⁴⁶⁶ *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974).

⁴⁶⁷ *Ruckelshaus v Monsanto Co.*, 467 US 986 (1984).

⁴⁶⁸ Jens Schovsbo, Timo Minssen and Thomas Riis (eds), *The Harmonization and Protection of Trade Secrets in the EU* (Edward Elgar Publishing 2020).

⁴⁶⁹ Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the Protection of Undisclosed Know How and Business Information (Trade Secrets).

⁴⁷⁰ *Coco v A.N. Clark (Engineers) Ltd.* [1969] RPC 41.

⁴⁷¹ *Faccenda Chicken Ltd. v Fowler* [1987] Ch 117.

⁴⁷² David S. Levine & Ted Sichelman, "Why Do Startups Use Trade Secrets?", 94 Notre Dame Law Review 751 (2018).

⁴⁷³ Jens Schovsbo, Timo Minssen and Thomas Riis (eds), *The Harmonization and Protection of Trade Secrets in the EU* (Edward Elgar Publishing 2020).

the production of innovative ideas while allowing businesses to keep information secret. Potential subject matter includes research and development, technical information, trade secrets in manufacturing, software, algorithms, and commercial strategies.⁴⁷⁴ The main legal instrument is Directive (EU) 2016/943. It balances and protects undisclosed know-how and business information against unlawful acquisition, use and disclosure throughout the EU and gives national courts the power to enforce it. For example, *Monsanto Technology LLC v Cefetra BV*⁴⁷⁵, determined the treatment of secret technological data under the EU intellectual property regime. Under national implementing legislation, the Directive also contributes to promoting innovation, cross border movement of goods and competitiveness of EU enterprises⁴⁷⁶ by making trade secrets part and parcel for the EU knowledge-based economy.

ANALYSIS

Trade secret protection in the United States, United Kingdom, the European Union, and India can be considered variations of the same essential approach of protecting economically valuable information, although the legal treatment of trade secrets in these jurisdictions is distinct. The US system of trade secret protection is the most advanced and pro-business one.⁴⁷⁷ The Uniform Trade Secrets Act (UTSA, 1979), the Defend Trade Secrets Act (DTSA, 2016) and the decision of the Supreme Court of the United States in *Kewanee Oil Co. v. Bicron Corp.*⁴⁷⁸ (1974) were centered on the incentive nature of trade secrets. The UK and the EU took a compromising approach to control trade while allowing labor mobility and competitive market practice.⁴⁷⁹ The examples include The Trade Secrets (Enforcement, etc) Regulations 2018, Directive (EU) 2016/943, *Coco v A.N. Clark (Engineers) Ltd* (1969) 1 WLR 1289, and *Faccenda Chicken Ltd v Fowler* (1987) ICR 169. Trade secrets are regulated under Indian Contract Act, 1872, equitable doctrines, Article 39 of the TRIPS agreement and other Indian judgments such as *John Richard*

⁴⁷⁴ Christoph Radauer, Nicola Searle and Martin Bader, *The Possibilities and Limits of Trade Secrets to Protect Data Shared Between Firms* (2023).

⁴⁷⁵ *Monsanto Technology LLC v Cefetra BV*, Case C-428/08.

⁴⁷⁶ Tanya Aplin, Christoph Radauer, Martin Bader and Nicola Searle, 'The Role of EU Trade Secrets Law in the Data Economy: An Empirical Analysis' (2023)

⁴⁷⁷ Brian T Yeh, *Protection of Trade Secrets: Overview of Current Law and Legislation* (Congressional Research Service 2014) 6–8.

⁴⁷⁸ *Kewanee Oil Co. v. Bicron Corp.*, 416 US 470 (1974).

⁴⁷⁹ Jens Schovsbo, Timo Minssen and Thomas Riis (eds), *The Harmonization and Protection of Trade Secrets in the EU* (Edward Elgar Publishing 2020).

Brady v. Chemical Process Equipments Pvt. Ltd.⁴⁸⁰ (1987) and American Express Bank Ltd. v. Priya Puri ⁴⁸¹(2006).The doctrine of breach of confidence by the Indian judiciary has been generally expanded but the position remains uncertain for investors in India. To conclude, all four jurisdictions recognize trade secrets as planned investments in the knowledge economy; however, the protection offered by statute to trade secrets is most robust in the United States, The United Kingdom and European Union have harmonized responsible systems for trade secrets, while India uses courts and contracts.

COMPARISONS WITH OTHER FORMS OF IPR

The difference between trade secrets and other forms of intellectual property rights is very obvious. For instance, where the intellectual property right is a patent, then the patent has already been registered and has been made available in exchange for the temporary right to exploit the invention.⁴⁸² On the other hand, trade secrets are held under the non-registration mode of holding intellectual property rights, and they remain in existence provided the secret is not known to the public and is still of value to the business.

The main difference between trade secrets and copyright⁴⁸³ is that the latter relates to confidential commercial information which is fixed in a tangible medium and is original (literary, artistic, music, or software), while the former applies to all forms of confidential commercial information that provide the owner with some competitive edge in the business. The meaning of this is that trademarks relate to trade marks (brand names, logos, or symbolics), while trade secrets relate to confidential commercial information providing some competitive edge in the business. Industrial designs relate to ornamental design of products, while trade secrets relate to underlying technical knowledge.

In this regard, trade secrets are different from patents, trademarks and designs that should be registered under the laws; trade secrets need the idea of confidentiality along with the legal process of preserving such an idea from any type of misuse. Firstly, it should be understood that

⁴⁸⁰ *John Richard Brady v. Chemical Process Equipments Pvt. Ltd.*, 1987 SCC OnLine Del 17.

⁴⁸¹ *American Express Bank Ltd. v. Priya Puri* (2006)IIILLJ540DEL

⁴⁸² World Intellectual Property Organization, *Guide to Trade Secrets and Innovation* (WIPO 2024).

⁴⁸³ World Intellectual Property Organization, *Guide to Trade Secrets and Innovation* (WIPO 2024).

unlike other kinds of intellectual property rights, trade secrets are one of the most flexible and economic ways of safeguarding intellectual property.⁴⁸⁴

LEGAL STATUTES SURROUNDING TRADE SECRETS IN INDIA

In India, there are no laws regarding trade secrets. Trade secrets have been handled in India using the principles of contract, equity, precedence, and international laws. With regards to India, the most relevant law relating to trade secrets in India is Indian Contract Act, 1872.⁴⁸⁵ Another principle that has been used by the court is the principle of breach of confidence.⁴⁸⁶

However, India is a party to the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), 1994. The obligation of protecting information from any commercial misuse and unapproved disclosure has been imposed on members under Article 39 of the TRIPS Agreement, thereby affecting Indian trade secret jurisprudence.

The Indian judicial system has actively participated in making the laws concerning the trade secrets. It is seen from the case study “John Richard Brady v. Chemical Process Equipments Pvt. Ltd.”⁴⁸⁷ (1987) that the High Court of Delhi has passed its order on the protection of confidential business information. In the same way, in the case of American Express Bank Ltd. v. Priya Puri⁴⁸⁸ (2006), the trade secrets and confidential information have to be protected by the judiciary, whereas Zee Telefilms Ltd. v. Sundial Communications Pvt. Ltd.⁴⁸⁹ (2003) focused on the necessity of remedial measures in order to protect confidential information. However, despite all the judicial initiatives taken in this regard, there is no specific law of trade secrets in India.

However, the reliance on the principles of contract law and precedence has provided protection to individual cases but has not provided any predictability that is associated with codified Intellectual Property Laws.

⁴⁸⁴ David S Almeling, ‘Seven Reasons Why Trade Secrets Are Increasingly Important’ (2012) 27 *Berkeley Technology Law Journal* 1091.

⁴⁸⁵ Aruno Raj Singh, ‘Concept of Trade Secrets in India’ (2021) *International Journal of Law Management and Humanities*.

⁴⁸⁶ Muthukumar C, ‘A Study on Evolving Protection of Trade Secrets in India’ (2025) 1 *Sai Sindhu International Journal of Research* 7.

⁴⁸⁷ *John Richard Brady v. Chemical Process Equipments Pvt. Ltd.*, 1987 SCC OnLine Del 17.

⁴⁸⁸ *American Express Bank Ltd. v. Priya Puri* (2006) III LLJ 540 DEL

⁴⁸⁹ *Zee Telefilms Ltd. v. Sundial Communications Pvt. Ltd.* 2003(27)PTC457(BOM)

JUDICIAL PRECEDENCE SURROUNDING TRADE SECRETS

World

The legislation on Trade Secrets of the **United States** has been established within the huge precedents related to the subject matter. The decision in the case of *Kewanee Oil Co. v. Bicron Corp.*,⁴⁹⁰ (1974) of the Supreme Court of the United States states that trade secret laws should supplement the patent laws and therefore foster inventions without interfering with the policy of patents. Subsequently, the Supreme Court made its decision in the case of *Ruckelshaus v. Monsanto Co.*,⁴⁹¹ (1984), stating that trade secrets possess constitutional protection in the form of property rights. In addition, the decision in the case of *PepsiCo, Inc. v. Redmond*,⁴⁹² introduced the principle of inevitable disclosure.

For implementing the concept of trade secrets in the **UK**, the common law principle of the breach of confidence has been followed. It can be seen from the case of *Coco v. A.N. Clark (Engineers) Ltd.*⁴⁹³ In this case, the key factors of proving a breach of confidence have been outlined. There are three main factors that have to be proved for a breach of confidence. They include that the information should be of confidential nature, the information should be imparted in the condition of confidentiality, and the information should be misused without authority.

The judicial doctrine of the **European Union** in respect of trade secrets has been developed after introducing Directive (EU) 2016/943⁴⁹⁴ on the protection of undisclosed know-how and business information (trade secrets). Although the Court of Justice of the European Union (CJEU) has not pronounced many decisions with reference to this Directive, the provisions of the Directive are gradually being applied in the national courts when dealing with the cases of unauthorised acquisition, use, and disclosure of trade secrets.

India

Judicial precedents represent the key source of trade secret law in India owing to the lack of a separate legislation on this matter. The courts of India use the equity principle of breach of

⁴⁹⁰ *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470

⁴⁹¹ *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986

⁴⁹² *PepsiCo, Inc. v. Redmond*, 54 F.3d 1262 (7th Cir. 1995)

⁴⁹³ *Coco v. A.N. Clark (Engineers) Ltd.*, [1969] RPC 41.

⁴⁹⁴ Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the Protection of Undisclosed Know How and Business Information (Trade Secrets).

confidence, the Indian Contract Act of 1872, and Article 39 of the TRIPS Agreement for the protection of confidential business information. Confidential commercial information and technical know-how have been recognized by the Delhi High Court as proprietary material in *John Richard Brady v. Chemical Process Equipments Pvt. Ltd.*⁴⁹⁵ case of 1987. The Bombay High Court has ruled in *Zee Telefilms Ltd. v. Sundial Communications Pvt. Ltd.*⁴⁹⁶ (2003) case that confidential ideas shared in confidence cannot be commercially exploited without permission. In *American Express Bank Ltd. v. Priya Puri*⁴⁹⁷ (2006) case, the Indian Supreme Court differentiated between an employee's skill and the confidential information of an employer. The same court has confirmed the validity of obligations of confidentiality when trade secrets are concerned in *Emergent Genetics India Pvt. Ltd. v. Shailendra Shivam*⁴⁹⁸ (2011). These cases have laid down the essential principles in trade secret law in India. Yet, there is no doubt that the lack of special legislation causes uncertainty in the area notwithstanding the developed precedent.

TRADE SECRET AND BUSINESS

Trade secrets are very crucial in any business in the entire world. Trade secrets enable businesses to safeguard their trade secrets and get competitive advantage through keeping their secrets of knowledge and information from being stolen by their competitors.⁴⁹⁹ Contrary to patents, trademarks, and copyrights where the owner is supposed to register the trade secrets and make them public, trade secrets do not have to be registered and made public, hence enabling business to keep the trade secrets confidential for example, manufacturing procedures, product formulae, technical skills, research and development information, customers' lists, marketing techniques, prices and financial information.⁵⁰⁰

⁴⁹⁵ *John Richard Brady v. Chemical Process Equipments Pvt Ltd*, 1987 SCC OnLine Del 17.

⁴⁹⁶ *Zee Telefilms Ltd. v. Sundial Communications Pvt. Ltd.* 2003(27)PTC457(BOM)

⁴⁹⁷ *American Express Bank Ltd. v. Priya Puri* (2006)IIILLJ540DEL

⁴⁹⁸ *Emergent Genetics India Pvt. Ltd vs Shailendra Shivam And Ors* on 2 August, 2011

⁴⁹⁹ William F Crittenden, Victoria L Crittenden and Allison Pierpont, 'Trade Secrets: Managerial Guidance for Competitive Advantage' (2015) *Business Horizons*.

⁵⁰⁰ David S Almeling, 'Seven Reasons Why Trade Secrets Are Increasingly Important' (2012) 27 *Berkeley Technology Law Journal* 1091.

Trade secrets are especially significant in today's knowledge economy⁵⁰¹ as the companies depend on innovative products and processes which are protected owing to their secrecy. Through trade secrets protection, companies will get a profit from the money they invested in research and development thus maintaining their competitiveness in the market place.⁵⁰² Moreover, through trade secrets protection, it will be possible to collaborate with employees, investors, suppliers and business partners as long as confidentiality is observed. In case trade secrets are not appropriately protected, there will be a risk of financial loss as well as a risk of loss of reputation for the affected company, while a loss in terms of competitive advantage, should not be overlooked.

In order to maintain secrecy and protect trade secrets, businesses implement various measures of protection. These include the use of non-disclosure agreements (NDAs), a company's confidentiality policy, limiting access to information⁵⁰³ to those who 'need to know', protective IT solutions and training of staff. In summary, trade secrets have become vital assets to businesses around the world and play a significant role in fostering innovation, enabling commercial growth and ensuring long-term business success in a globalized and highly competitive world.

LIMITATIONS AND SUGGESTIONS

Although trade secrets are very important for the protection of secret know-how of any business to counteract unfair industrial activities, they have, however, some limitations. The most important limitation of trade secrets is that when the information covered by trade secrets is exposed into public domain then there would be no liability or responsibility on any person's part even though such information is protected by a patent. Any person can develop that information even by independent discovery or by reverse engineering of information relating to trade secrets and there shall be no legal barrier in his way.⁵⁰⁴

⁵⁰¹ David S Levine and Ted Sichelman, 'Why Do Startups Use Trade Secrets?' (2018) 94 *Notre Dame Law Review* 751.

⁵⁰² I P L Png, 'Law and Innovation: Evidence from State Trade Secrets Laws'.

⁵⁰³ World Intellectual Property Organization, *Guide to Trade Secrets and Innovation* (WIPO 2024).

⁵⁰⁴ Brian T Yeh, *Protection of Trade Secrets: Overview of Current Law and Legislation* (Congressional Research Service 2014).

Even with various contracts, cases and equitable doctrines in place to protect trade secrets of Indian companies, a comprehensive legislation to regulate trade secrets is the missing link. The absence of uniform legislation creates uncertainty and puts Indian businesses at a disadvantage.⁵⁰⁵ In order to establish the existence of a trade secret, reasonable measures to preserve confidentiality and to prove actual misappropriation before a court, evidence is required to prove the same. But, in today's world of digital revolution, increasing cyber crimes, adoption of artificial intelligence by organizations, increased working from home and employee mobility across geographies,⁵⁰⁶ the risk of disclosure/leakage of confidential information is increasing manifold⁵⁰⁷ and calls for a robust legal framework to deal with such situations.

To address these problems, it is imperative for India to enact a dedicated Trade Secrets Act. The statute needs to define trade secrets clearly, prescribe standards for identification of information which qualify for the protection of trade secrets and enable grant of relief including relief by way of injunctions, and assessment of damages together with order for delivery of information which constitutes a trade secret, etc. Additionally, it is necessary to impose positive obligations of employers as well as employees, strike a balance to ensure legitimate employee mobility and whistle-blower protection. Setting up commercial courts as well as intellectual property courts and hearing trade secret cases on a continuous basis in specially designated Intellectual Property benches will facilitate expeditious and consistent determination of cases. In addition to this, greater cyber security, mandatory requirement for certain industries to observe confidentiality, awareness about management of trade secrets among users and other stakeholders will help in improving compliance. Harmonizing Indian laws with Article 39 of TRIPS Agreement as well as global standards will increase investor confidence and help in developing an innovation culture. The proposed legislative reforms shall thus create a trade secret regime which would be conducive to the protection of confidential information relating to business carried out by entities engaged in India's rapidly growing knowledge economy.

CONCLUSION

⁵⁰⁵ World Intellectual Property Organization, *Overview of National and Regional Trade Secret Systems: India* (WIPO 2024) 1.

⁵⁰⁶ John G Sprankling, 'Trade Secrets in the Artificial Intelligence Era' (2024).

⁵⁰⁷ Christoph Radauer, Nicola Searle and Martin Bader, *The Possibilities and Limits of Trade Secrets to Protect Data Shared Between Firms* (2023)

Trade secrets have become vital assets that are essential to the knowledge economy, in which innovation, information, and technological developments play a critical role in economic prosperity and competitive advantage in the market. Trade secrets do not necessitate registration or disclosure in order to be protected and can allow the organization to enjoy its competitive edge forever. The importance of trade secrets ranges from a number of industries such as technology, pharmaceuticals, manufacturing, biotechnology, and finance industries.

Comparative analysis of the jurisdictions such as India, the United States, the United Kingdom, and the European Union, reveals that the jurisdictions have a similar perception regarding the economic importance of trade secrets even with different approaches adopted by them. Whereas some jurisdictions such as the United States and the European Union have developed a legislative regime for protecting the trade secrets, India still depends on the contractual approach to protect its trade secrets.

Given the increasing involvement of organizations in operations which have both digital and international elements, there is no doubt that the risks of misappropriation of trade secrets will rise. To make sure of the protection of these secrets legally, it is important to set appropriate laws and regulations for their enforcement and for observing confidentiality. An appropriate and updated trade secret system will not only provide protection of secrets but also promote innovations and sustainable development.

CHAPTER 13: TRADE SECRET PROTECTION IN EMPLOYMENT AND LABOUR RELATIONSHIPS

BY PRAPTI VORA

INTRODUCTION

Coca-Cola generated over 50 billion dollars in annual revenue in 2025, along with over 12 billion dollars as accounted on March 31, 2026, alone, a 13% increase every year.⁵⁰⁸ This is due to their infamous well-kept secret recipe- a trade secret. Trade secrets are a type of intellectual property right that protects any confidential information, as they give companies a competitive edge.⁵⁰⁹ It is the formula that can make or break a company. It is the most confidential aspect of a company, and companies go to great lengths to hide these secrets. However, companies are not entirely run by robots or machinery, but also by human employees. Employment is a contract between the buyers and suppliers of labour,⁵¹⁰ and is the area where ideas and knowledge must be shared to grow and create value for the company, but not all are going to stay in the company forever; NDAs and non-compete agreements are signed to keep the secret intact. In such a cycle of employees and labour relations, a paradox evolves; the very people who can be entrusted with the confidential methods are most capable of getting away with leaking secrets to competitors or building a company of their own. Unlike trademarks or copyrights, trade secrets are unique as they can only be protected by contracts and mainly rely on trust. Here, this paper analyses the ethics of trade secrets, the consequences of a strict regime for the protection of such confidential information and recommends a middle ground to the existing legal and social gaps in this area of intellectual property.

⁵⁰⁸ The Coca-Cola Company, “Coca-Cola Reports First Quarter 2026 Results and Updates Full Year Guidance” 1 (2026).

⁵⁰⁹ Ananya Gupta, What is a Trade Secret? Definition, Characteristics, and Types, <https://www.pw.live/legal-skills/exams/what-is-a-trade-secret> (last visited on January 19, 2026).

⁵¹⁰ C. Muntaner, I. Kim, et.al. (ed.), Populations at Special Health Risk: Workers, *International Encyclopaedia of Public Health*, 2008.

Indeed, there can be no talk about abstraction since the issue arises in actual conflicts, whether through non-compete agreements, confidentiality covenants, or in lawsuits involving misappropriation. It is necessary to strike a balance between an individual's freedom and his/her employers' rights to keep information secret, without making the employee feel stuck at the job or allowing him or her to walk away with such information.

QUALIFICATIONS AS A TRADE SECRET

According to the explanation provided by WIPO, trade secrets are intellectual property rights to confidential information that offers a competitive advantage. Three main criteria must be met for information to qualify as a trade secret: First, it must have economic value in its secret form; second, it should be accessible to only a limited number of people; third, reasonable measures should be taken by its owner to maintain its secrecy, such as using non-disclosure agreements.⁵¹¹ Any acquisition, use, or disclosure of the information that violates principles of fair competition constitutes unfair competition. The scope of trade secrets encompasses all types of information, including both technical aspects, such as production methods, testing results of pharmaceuticals, and software source codes, and commercial aspects, such as supplier databases, customer lists, marketing strategies, and logistics. Even the combination of publicly known elements may be considered a trade secret if it is kept confidential and provides a competitive advantage. Therefore, the key element of a trade secret is not the novelty of the information but its confidentiality.

EVOLUTION OF TRADE SECRETS

A. Historical Roots

The history of trade secrets dates back to ancient Rome and Europe, from around 753 BC to the 5th century, and from the 5th to the 15th century, respectively. During this period, slaves and artisans often retained commercial secrets from their masters. Artisans involved in pottery and dyeing, in particular, kept secrets for their masters in exchange for commercial advantage. Then

⁵¹¹ Trade Secrets, World Intellectual Property Organisation.

the concept of *actio servi corrupti* emerged; a Roman jargon referring to the act of competitors corrupting slaves into revealing trade secrets, which protected the owners against such rivals.⁵¹² During the Middle Ages, a stricter regime was adopted; secrecy shifted from slavery to guild-based craftsmanship, where guild-imposed restrictions prevented the disclosure of confidential information. Trade secrets were often passed down within families to preserve tradition and ensure commercial success for generations.⁵¹³ For example, the world-famous Coca-Cola recipe is one of such trade secrets to be handed down through generations to maintain secrecy and prevent disclosure to untrusted individuals. Thus, the guilds systematized secrecy and condemned slaves or artisans who disclosed such information meant to be kept a secret.

B. The Era of Industrial Espionage and Legal Protection

The First Industrial Revolution made secrecy a currency of international competition instead of a matter of guilds. In England, there were ordinances and guild restrictions meant to prevent disclosures; however, afterwards, the guild tried to collect pennies from those who operated without the guild's permission, courts pointed out that such efforts exuded a monopolistic mindset of the guilds.⁵¹⁴ On the other side, the U.S.A. witnessed Samuel Slater's illegal importation of the secrets of cotton mill production; a deed that could have been prosecuted as a crime in England, and is now considered a case study of industrial espionage.⁵¹⁵ However, in the late nineteenth century, international law started to create legal parameters regarding such practices. The Paris Convention of 1883 recognised the problem of unfair competition internationally.⁵¹⁶ Meanwhile, American jurisprudence took the decisive step towards the doctrine of equity. In *Peabody v. Norfolk* (1868), secret processes were equated to goodwill and subject to injunctions.⁵¹⁷; and by 1907, courts established the precedent that disclosure would always be restrained. Further development along the doctrinal continuum is evident in the case of *Du Pont v. Masland* (1917), in which Justice Holmes rejects property language and places trade secrets in a wider context of unfair competition.⁵¹⁸ It is precisely this development, which is

⁵¹² A. Arthur Schiller, "Trade Secrets and the Roman Law; The *Actio Servi Corrupti*", 30 *Columbia Law Review*, 839 (1930).

⁵¹³ Tania Sebastian, "Looking Back To Move Forward: An Exploration of the History of Trade Secrets in the World as a Lesson for India", 16 *Journal of Advances and Scholarly Researches in Allied Education*, 3066 (2019).

⁵¹⁴ *Cloth Workers of Ipswich* (1614), *Godb R* 252.

⁵¹⁵ James Surowiecki, "America's History of Industrial Espionage", *The New Yorker*, Jun. 9, 2014.

⁵¹⁶ The Paris Convention, 1883, art. 10bis(3).

⁵¹⁷ *Peabody v. Norfolk* (1868) 8 Mass. 452.

⁵¹⁸ *Du Pont De Nemours Powder Co. v. Masland* (1917), 244 U.S. 100.

characterised by the move from natural law to social purpose, that becomes the foundation of contemporary doctrine.

These developments became consolidated in the twentieth century via the implementation of the Uniform Trade Secrets Act (1985) up until the Defend Trade Secrets Act of 2016. Notable cases, such as *Kewanee Oil Co. v. Bicron Corp.*⁵¹⁹ and *Warner Lambert Co. v. Execuquest Corp.*, reinforced trade secrets as valid alternatives to patents.⁵²⁰ In England, *Newberry v. James* (1817), where the plaintiff claimed and requested relief against a defendant for illegally revealing confidential information regarding medicine used for gout, the courts ruled that contracting parties can be restrained from making any disclosures.⁵²¹

C. Present Situation and Protection through Various Jurisdictions

In the 20th Century, the protection of trade secrets was taken more seriously as companies started growing rapidly and creating massive profits globally, even influencing economies. And with strong and cut-throat competition, their formulas/recipes/ or algorithms getting leaked is not an option, as it can lead to their downfall and a massive fall in stocks. The Trade-Related Aspects of Intellectual Property Rights (TRIPs) Agreement, which is a World Trade Organisation (WTO) treaty, was formed in 1994 to establish global standards and baseline rules for many kinds of Intellectual property, such as copyrights, trademarks, patents, geographical indications (GIs), and undisclosed information; trade secrets. It required the mandatory implementation of adequate protections against wrongful disclosure of confidential information in the context of global trade.⁵²² With such global legal awakening regarding the protection of trade secrets, major countries have adopted their own approach:

- **United States:** This first well-known definition was offered by The Restatement of Torts (1939), further elaborated in the Uniform Trade Secrets Act (1979; revised in 1985), and eventually protected by the Defend Trade Secrets Act (2016). The Economic Espionage Act was adopted in 1996 and established criminal sanctions regarding the theft of trade secrets.

⁵¹⁹ *Kewanee Oil Co. v. Bicron Corp* (1974), 416 U.S. 470 .

⁵²⁰ *Warner Lambert Co. v. Execuquest Corp.* (1998), 427 Mass. 46.

⁵²¹ *Newberry v. James* (1817), 35 Eng. Rep. 1011.

⁵²² World Trade Organisations, TRIPS- Trade-Related Aspects of Intellectual Property Rights.

- **UK:** Confidentiality was and remains ensured through the law of equity and breach of confidence, along with an established law, The Trade Secrets (Enforcement, etc.) Regulation 2018, with rules against theft, bribery, and breach of an existing non-disclosure agreement.⁵²³

- **Japan & Korea:** Both countries adopted Unfair Competition Prevention Acts in the 1990s, which cover wide definitions of trade secrets and penalise any misappropriation of the latter, although courts require strict proof of secrecy.⁵²⁴

- **India:** In the current landscape regarding protection against the exploitation of proprietary information, India still lacks proper legislation for the protection of trade secrets. The protection of trade secrets in India is provided within a fragmented regime comprising various legal regimes. At present, contracts, such as non- disclosure agreements (NDAs) and confidentiality agreements, still form the primary source of protecting the company's trade secrets, although they are restricted by Section 27 of the Indian Contract Act of 1872, which says any agreement is invalid if it restrains trade.⁵²⁵ Furthermore, trade secrets can be protected by the means of equity and breach of confidence, as courts recognise the obligations of confidentiality regardless of the presence of any contractual agreements. Moreover, unfair competition tort, criminal breach of trust and cheating also give additional protection to trade secrets.⁵²⁶ Finally, the Information Technology Act of 2000 provides additional protection of trade secrets in terms of imposing criminal liabilities for the unauthorised access and disclosure of confidential information.⁵²⁷ However, the issue of lack of enforcement remains relevant in cases when information is leaked to third parties, further deepening a legal lacuna, with courts not willing to enforce the non-compete agreements. Thus, due to the problems mentioned above, the 22nd Law Commission of India in 2024 recommended the Trade Secrets Protection Bill and the Economic Espionage Act.

⁵²³ Aled Richard Jones, Chloe Taylor, et.al., In brief: protection of trade secrets United Kingdom, Lexology, <https://www.lexology.com/library/detail.aspx?g=9b2bc06d-7725-4074-8db6-61817153fbc3> (Oct. 6, 2023).

⁵²⁴ WIPO, OVERVIEW OF NATIONAL AND REGIONAL TRADE SECRET SYSTEMS- REPUBLIC OF KOREA.

⁵²⁵ The Indian Contract Act, 1872 (Act 09 of 1872), s. 27.

⁵²⁶ Bharatiya Nyaya Sanhita, 2023 (Act 45 of 2023) ss. 316, 318.

⁵²⁷ The Information Technology Act, 2000 (Act 21 of 2000) s. 72.

DOUBLE-EDGED SWORD WHILE REVEALING TRADE SECRETS

Disclosure of a trade secret is a dual notion since, on one hand, revealing information is associated with losing the competitive edge of the company, losing reputation, and years of investments due to leakage of the information, like with Coca-Cola formula⁵²⁸ and DuPont Kevlar lawsuit, where in which a former DuPont employee disclosed confidential information on Kevlar production technology to the Korean company's competitors, resulting in one of the largest trade secret scandals⁵²⁹, on the other hand, it might just be a disguise of fraud, and the person who reveals the information, a noble act to disclose information in public interest and for the right to information the consumers or people in general should know about; the very information these companies try to hide. An example in this regard is the Theranos company, where the informants revealed the most confidential information, that their innovative blood tests were revealed to be fraudulent and thus, were prevented from causing damage to people's health.⁵³⁰ In a similar case, the Facebook-Cambridge Analytica scandal, the leak of information raised questions regarding people's private information being stored illegally, the privacy and ethics in collecting and using such information. Another example is the Enron Company,⁵³¹ which used trade secrets to hide serious fraud, and a whistleblower managed to uncover it. It is obvious that the duality of trade secret disclosure is evident since trade secrets may serve as protection for innovations, but at the same time, they are being used as a disguise for company malpractice.⁵³²

From the viewpoint of an employee working in such a company, disclosure of a trade secret turns out to be an ethical dilemma for them because there is a clash between fulfilling the obligations arising from a confidentiality agreement and performing the duties required in the interest of the general good. On the other hand, whistleblowers find themselves standing right at the crossroads where, on one path, they have to choose the right path in accordance with their ethics, but on the other can jeopardise the jobs of the employees working or dependent on such companies. For instance, when the Theranos fraud was revealed by Tyler Shultz and Erika Cheung, the

⁵²⁸ United States v. Williams (Coca-Cola Case), 548 F. Supp. 2d 1332 (N.D. Ga. 2007).

⁵²⁹ DuPont v. Kolon Industries(2015), 782 F.3d 605 (4th Cir. 2015).

⁵³⁰ United States v. Elizabeth Holmes, et al. 18-CR-00258-EJD.

⁵³¹ Aurther Andersen LLP v. United States (2005), 544 U.S. 696.

⁵³² Skilling v. United States (2010), 561 U.S. 358.

employees were prepared to risk retaliation for blowing the whistle on the fraudulent medical claims by the company.⁵³³ In addition, in the other case where Facebook disclosed to the political campaign using data obtained from its social network, internal whistleblowers made the disclosure regarding the use of the confidential data in the political campaign. Employees seem not only to be guardians of trade secrets but also persons making decisions in accordance with the principles of ethics and justice. It is worth noting that trade secret laws must not be in contradiction with the laws for protecting whistleblowers, since trade secrets can be used for immoral purposes.

TRADE SECRETS IN RELATION TO EMPLOYMENT AND LABOUR RELATIONSHIP

It is certain that in employment relations, the trade secrets will be most vulnerable to being disclosed, as it is exactly those people who possess confidential know-how who can leak the secrets to competitors. As far as practice is concerned, the list of mechanisms used to prevent employees from disclosing trade secrets includes tools such as non-disclosure agreements, confidentiality covenant and non-compete agreements. Such a set of tools forms a paradox, ensuring the protection of the company's ideas through keeping things confidential, while at the same time restricting the mobility and innovating capacity of the very employees.

The concern regarding such a problem has been addressed by various courts across different jurisdictions. While U.S. courts provide employers with equitable remedies to restrain employees from misusing their trade secrets and even the rights specified by the Uniform Trade Secret Act (UTSA)⁵³⁴ and the Defend Trade Secret Act (DTSA), they still preserve the right of an employee to practice his/her profession. Meanwhile, UK courts rely on the doctrine of equitable confidence that prevents the employee from utilising information obtained during his/her work under confidential conditions without any contract. The situation in India is different due to the prohibition of non-compete clauses by Section 27 of the Contract Act.⁵³⁵ In today's workplace,

⁵³³ Erin Griffith, Theranos whistle-blower testifies she was alarmed by the company's blood tests, *The New York Times*, Oct. 06, 2021.

⁵³⁴ Uniform Trade Secrets Act, amended in 1985, ss. 1, 2, 3.

⁵³⁵ The Indian Contract Act, 1872 (Act 09 of 1872), s. 27.

the challenge becomes more pronounced. India's stagnant law regarding IPR should be addressed. As such, the law needs to be flexible enough to maintain the proper balance between secrecy and freedom.⁵³⁶

ETHICS OF TRADE SECRETS IN RELATION TO EMPLOYMENT

A. Business Ethics as an Underlying Principle

Trade secrets law does not involve only information protection; it excludes fair play as well. In *Kewanee Oil v. Bicron*, courts emphasise that secrecy cannot be “jungle law,” but instead, it should promote morality in business dealings.⁵³⁷ Another landmark case is the *DuPont Co. v. Christopher*, where the U.S. Fifth Circuit Court also emphasised that collecting or discovering a competitor's trade secret is an actionable wrong under any circumstances.⁵³⁸

B. Employee Mobility versus Employer Protection

No employee stays forever working in the same company. And while working, employees certainly develop skills and knowledge. The ethical dilemma here lies in whether they appropriate their own experience or steal from the company when leaving for another employer. Such dilemmas are particularly relevant for hi-tech industries where knowledge is highly mobile and turnover rates are high. This aspect cannot be tested or measured, as knowledge and skill development are unmeasured qualitative aspects. Thus, it is not easy to pinpoint whether condemning an employee for his skill development can really protect the former or current employer.

C. Labour Relations' Influence

NDAs, confidentiality agreements and non-compete clauses are typical instruments of securing information, but they might prove unethical when pressuring whistleblowers and limiting career opportunities. Employees can claim to be intimidated by agreements that may be too restrictive in nature. Ethical management means reasonable agreements and labour policies.

⁵³⁶ Mayank Kapila, Sarthak Kapila, Trade Secrets: Renewing the Old Regime, Manupatra Articles, <https://articles.manupatra.com/article-details/Trade-Secrets-Renewing-the-Old-Regime> (May 6, 2013).

⁵³⁷ *Kewanee Oil Co. v. Bicron Corp* (1974), 416 U.S. 470.

⁵³⁸ *E. I. du Pont de Nemours & Co. v. Christopher* (1970), 431 F.2d 1012.

Ethics come into play in the discussion about trade secrets and employees, as it is not always easy to reconcile the principles of confidentiality and fairness.

Another case is *Waymo v. Levandowski*, in which Google's self-driving car subsidiary accused its former engineer of stealing thousands of files before joining Uber.⁵³⁹ Another case where the courts were questioned regarding trade secrets and their complex ethical dilemmas is *International Business Machines Corporation (IBM) v. Papermaster* (2008), where IBM attempted to prevent a senior executive from joining Apple because he possessed a trade secret related to microprocessor design. As can be seen from the above cases, trade secrets are not limited to formulations or software but include manufacturing techniques, product designs, and even management techniques.⁵⁴⁰ Each of the above cases demonstrates the ethical dilemma: where, on one hand, there is the need for organisations to secure their innovation, while, on the other hand, employees fear restrictive practices.

RIGID TRADE SECRET PROTECTION HINDERS INNOVATION

Around the world, corporations make employees sign non-compete contracts and non-disclosure agreements to keep their trade secrets within themselves and prevent former employees from spilling the secrets to competitors. Lately, U.S. companies have tried to approach the aspect of protecting their confidential information with a more employer-friendly trade secrecy regime/ rigid trade secret protection. Meaning that the rights to these trade secrets are in the hands of the employer rather than employees, and in turn will tighten their hold on the research and development department of their own company. However, this regime can backfire on the company itself as it majorly hinders one of the important aspects that contribute to the growth of companies; innovation.

Employers, while adapting to such a regime, hire more people to research and provide ideas to the company, but if the primary source of research is withheld by the employer itself, no number of employees will be capable of sharing or creating new prospects for the company. The regime presents itself as a paradox: employers are promised stability and investment security, yet risk

⁵³⁹ *Waymo LLC v. Uber Technologies INC* (2018)) 3:17-cv-00939 (N.D Cal.).

⁵⁴⁰ *International Business Machines Corporation (IBM) v. Papermaster* (2008), 7:08-cv-09078.

the dynamism of labour and diminish the creative potential of employees, the primary object on which they are hired in the first place. On the one hand, employers having a strong hold on the confidential know-how will push the firm to invest heavily, money and resources into R&D and specialised systems, will secure the knowledge and prevent proprietary information from falling into the hands of the competitor by any chance. This is done for the aim to foster or boost corporate confidence, sustain the competitiveness, in addition to specific situations where these companies can gain an advantageous upper hand, and by investing more, generating employment and labour opportunities. Springer's study talks about how the adoption of employer-friendly doctrines like inevitable disclosure increases firm R&D spending and patenting, reinforcing the claim that secrecy encourages investment. From an employer's perspective, without protection, competitors could free-ride on costly R&D, discouraging firms from investing in unique technologies.⁵⁴¹ Trade secrets thus act as a shield against unfair competition.

However, the employer's "shield" becomes a hanging dagger around employees' and labourers' necks. Rigid systems around controlling trade secrets create doctrines like the Inevitable Disclosure Doctrine (IDD), where it prevents employees and labourers from joining competitors on the presumption that the former employees will eventually use the former company's confidential information.⁵⁴² This doctrine, while protecting employers' interests, hinders innovation, restricts employee mobility, traps skilled workers in their current roles for a long time and limits their ability to find a new job for better wages or experiences. The job market moves on the basis of the circulation of ideas and opportunities, which this regime, by locking secrecy within the company's walls, hinders the broader innovation. Trapping employees will not help in any aspect of the company, especially while they try to employ more people for the same job that the trapped employees are able to do without much difficulty. Over time, employees lose creativity to innovate for the company, and can become a liability to the company. Furthermore, secrecy systems can also contribute to inequality, since skilled employees are prevented from relocating, but less skilled ones are not affected. Empirical studies conducted show that jurisdictions that rely on doctrines favourable to employers experience a significant decrease in

⁵⁴¹ Topan Ahmad Anhari Harahap, Nazwa Fitriana, et. al., "The Impact of Trade Secrets on Innovation and Product Development in the Technology Industry", 2 *Jurnal Cendikia ISNU-SU (JCISNU)* 192 (2025).

⁵⁴² Andrea Contigiani, Iwan Barankay, et. al., Trade Secrets and Innovation: Evidence from the "Inevitable Disclosure" Doctrine, Wharton, https://faculty.wharton.upenn.edu/wp-content/uploads/2017/01/Trade-Secrets_IDD_Oct-2017.pdf (Oct. 2017).

innovative output, especially in citation-weighted patents, thus demonstrating the impact of overprotection in terms of impact of employees and labourers. Similarly, the Harvard Business Review also claims that strict protection discourages cooperation and cumulation, resulting in the damage of innovation itself. The same shield used to protect proprietary information may also act as an obstacle to mobility, limit chances of capitalising on employees' skills, and reduce motivation to innovate.⁵⁴³

Therefore, trade secrets serve as both boon and bane for firms: they help companies sustain their competitive edge but trap employees, causing a lack of motivation to innovate. Such rigidity can cause damage to the company and its employees; thus, a middle ground lies in recognising that the company's secrecy should go hand in hand with employee mobility. A balanced framework must be created, where protection is provided to the employer, but to the extent that it doesn't hinder innovation and trap employees. Protection should not turn into a jail of knowledge inside the walls of a company; at the same time, liberate employees from misusing the former company's confidential information. Recommendations towards reform start with codification, with the aim to form a balance between employers' interests and employees' rights. Legislation in those countries that have no trade secret law at all, for example, India, should be developed in order not to impose excessive restraints on employees, but rather provide for proper protection. It is necessary to put a law regarding time limitations on inevitable disclosure injunctions, so as not to impose an indefinite prohibition on employees' ability to return to the job market after the terms of the contract end. Patents or an open innovation approach may be recommended in cases when disclosure contributes to the process of making further creations. It is also necessary to implement employee protection; rights should remain intact in the case of the employers of the corporations.

Taking everything into account, a rigid system of secret protection can do more harm than good. Companies don't need to spend more on employee recruitment, and employees shouldn't feel trapped and lacking motivation to innovate. A balanced regime must be imposed to protect employees from this trap while maintaining the protection of trade secrets. Such secrecy is only logical if alternative innovation methods are present.

⁵⁴³ Andrea Contigiani, David H. Hsu, How Trade Secrets Hurt Innovation, *Harvard Business School* (Jan. 29, 2019).

CONCLUSION AND WAY FORWARD

Trade secrets are the competencies that have enabled a company to grow to where it is today. Billion-dollar corporations like Apple, Coca-Cola, Uber and many more keep their secrets tight-lipped for them to be able to compete with significant competitors; Apple has Samsung, Coca-Cola has Pepsi, and Uber has Ola. However, the practice of protecting these trade secrets becomes complex within employee and labour relationships, as they are also carriers of knowledge and are among the first people who can disclose such secrets to competitors. While employees and labourers do sign NDAs and confidentiality agreements, excessive restrictions may lead to hurdles in employee mobility, downgrading creative innovation, and can backfire on the company itself. As we look into the evolution and qualifications of trade secrets across various countries, continuous progress is being made to find a balance between the rights of the employer regarding trade secrets and employees' freedom. As per the Indian context, there is still a lack of trade secret protection. While there is The Whistle Blowers Protection Act, 2024, to protect whistleblowers from harassment, it only applies to public servants and not employees of a corporation. There is a requirement for such laws in the Indian corporate world as the rest of the world has. At last, trade secret protection must not be a mechanism that keeps the knowledge inside companies, but it must be a process that promotes ethical competition, innovations, and proper employment policies.

CHAPTER 14: NON- DISCLOSURE AGREEMENTS AND CONTRACTUAL GOVERNANCE OF CONFIDENTIAL INFORMATION

BY GYANENDRA GUPTA & AKSHAY TIWARI

INTRODUCTION

The modern economy has been called a ‘knowledge economy’ because the single most valuable asset that is traded in any business is now information⁵⁴⁴. However, information is a strange sort of commercial property because the economic value it has derives from secrecy⁵⁴⁵. Confidential business information (which includes things like business strategies, manufacturing methods, client databases, know-how, results of scientific research and analysis, algorithms, proprietary methods, technical expertise and business systems) is quite likely to lie at the heart of the business itself.

Such information was, until fairly recently, maintained confidential on the strength of business trust and good faith, professional discretion and informal arrangements between business partners. In our increasingly globalized, technology-driven world with its more frequent transfers of employees across businesses, competitive partnerships and the ubiquitous use of digital data, it has become exponentially more difficult and risky to maintain the secrecy of commercially sensitive information. Indeed, digital copies of information can be instantaneously stored and transmitted across borders and within minutes of it ever entering our business information systems. For this reason there has been an increasingly widespread reliance on legally enforceable obligations created through agreements to protect confidential information.

By agreeing not to disclose and to restrict use to prescribed purposes, parties who become privy to commercial secrets take on legally binding obligations, which may be implemented at any

⁵⁴⁴ World Intellectual Property Organization (WIPO), *WIPO Guide to Trade Secrets and Innovation* 12–18 (WIPO, Geneva, 2024)

⁵⁴⁵ Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39(2)

stage of a commercial relationship whether it be in the employment context, in the course of merger and acquisition, technology licensing and research, as well as in the general business partner or commercial relationship and are thus seen as critical. A Non-Disclosure Agreement can be much more than a simple confidentiality agreement; increasingly the NDA is the governing device used in contracts with third parties where information is exchanged and used in particular ways. It regulates how that information can be held, used and communicated through contractual stipulations relating to the nature of confidentiality, permissible uses and the duration of the obligation.

Its relevance is perhaps greatest with regard to the treatment of information which is commercially sensitive by reason of its nature - in which case protection will be limited by reason of it falling into the realm of public domain or, in the more important instance with the law of trade secrets, simply for lack of use of contractual provisions designed to create and maintain confidentiality. Given there is no domestic legislation in India dealing specifically with the concept of trade secrets, courts in India rely very heavily on principles of contract law⁵⁴⁶ to determine the circumstances under which it would be unlawful for one person to disclose and make use of another's valuable business information, rather than on common law principles of breach of confidence. This chapter addresses the use of the Non-Disclosure Agreement as a contractually implemented means of managing the flows of confidential information.

It focuses on its relationship with trade secret law and will seek to place in context NDAs and their use in India both in relation to trade secret law, current usage patterns, as well as considering newer concerns regarding digital and AI driven information management and borderless transactions.

It will consider how best to leverage NDAs, in combination, to create comprehensive contractual protection for valuable information rather than focusing solely on how to construct and implement confidentiality covenants and terms.

CONCEPTUAL FOUNDATIONS OF CONFIDENTIAL INFORMATION AND TRADE SECRETS

⁵⁴⁶ V.F.S. Global Services Pvt. Ltd. v. Suprit Roy, 2008 SCC OnLine Bom 918; *American Express Bank Ltd. v. Priya Puri*, 2006 SCC Online Del 638

A. Meaning and Nature of Confidential Information

Confidential information represents an interesting legal construct situated somewhere within the general domains of intellectual property and commercial law. What distinguishes this type of property from typical forms of intellectual property, such as patent or trademark law, is that it's not the type of subject matter for which protection is typically granted on its face by statutory registration.⁵⁴⁷ Confidentiality is the essential component; the information is valued, protected, and ultimately useful by the fact that it is not in the public domain, is commercially or strategically relevant, and has been appropriately maintained in secret⁵⁴⁸.

From a general legal and business perspective, confidential information may include, for example: the trade practices, formulas, methods, recipes, sources of information and customer lists, or indeed any information that if it falls into the hands of a competitor would weaken the owner of the information relative to competitors.

It could also be in the form of research and development data, strategic plans, pricing and business methodology information and much more.⁵⁴⁹ Information of a commercially viable nature for a business often relies for its market advantage upon the preservation of its confidential status, because the use by another of such information may directly compete or devalue the proprietary information of the originating concern. The legal protection for confidential information relies, as does certain other types of intangible property such as copyright, on the common law protection that the person to whom information is given under an understanding or commitment of confidence ought not to disclose or use the information contrary to such confidence.⁵⁵⁰ It is necessary to note, therefore, that there is not any type of disclosed information which can claim the protection of the courts on the grounds of it being confidential.

Rather, it must meet requirements of its secrecy and not being available publicly to a relevant interested party; or, in more modern settings, be readily ascertainable from legitimate sources.

⁵⁴⁷ *Faccenda Chicken Ltd. v. Fowler* [1987] Ch 117.

⁵⁴⁸ Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39(2).

⁵⁴⁹ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 17–24 (WIPO, Geneva, 2024).

⁵⁵⁰ *Coco v. A.N. Clark (Engineers) Ltd.* [1969] RPC 41.

The true protection of information within a legal framework depends on more than mere content and requires the particular confidential context in which information arises or is held. There can be no argument that in this age of information technology that information holds a special place of importance for virtually every organization. Organizations do not rely upon physical resources to generate value or even market leading positions.

Intangible forms of value such as data, intellectual capital and information are what drive the competitive advantage of modern organizations. With businesses increasingly driven by technological innovation, data analytics and intellectual property for market leadership, information takes on a premier position and is of extreme value to an organization and the disclosure or unauthorized use of this information may be disastrous. Unfortunately, like so many intangible assets, information cannot typically be stolen in the same way a physical good can be taken.

It can, rather, be copied and/or disclosed and yet continue to exist with the original holder of it. If confidential information is disclosed outside of a controlled relationship and/or for unauthorized purposes, and its confidentiality is breached and thus lost in its exclusivity, it loses its commercial value. This special characteristic of confidential information makes a direct understanding of its nature vital in comprehending the importance and application of non-disclosure agreements to commercial transactions.

B. Trade Secrets and Proprietary Information

Not all confidential information constitutes a trade secret, although every trade secret is inherently confidential. The distinction matters, because trade secrets represent a specially privileged form of confidential information which has independent economic value precisely because of its secret status. In fact, modern trade secret law has evolved specifically because we have realized that there are certain forms of business information which are so fundamental to innovation, competitiveness, and commercial success that they require protection against unauthorized appropriation.

The international standard for trade secret protection is contained in Article 39 of the TRIPS Agreement,⁵⁵¹ which obliges member states to provide legal means that allow for the protection

⁵⁵¹ Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39(2).

of an “undisclosed information which is secret in nature, which has commercial value because of its secret nature and which has been subject to reasonable steps by the person legitimately in control of the information, to keep it secret.” Thus, the three criteria defining a trade secret can be enumerated as: (1) secrecy, (2) commercial value due to secrecy, and (3) active steps taken to keep it secret.⁵⁵² By contrast, trade secrets require neither registration, examination, nor public disclosure, and will exist only so long as they can be kept secret.

Trade secrets may comprise an endless array of commercial and technological information. Information such as chemical formulas, engineering designs, software code, client lists, production processes, scientific research data, financial results, market analyses, business plans, and business methods are often protected as trade secrets if they meet the required legal criteria. A classic example of a trade secret would be the formula for a globally-famous soft drink, the commercial value of which has been maintained for over a century, not through patent protection, but through an array of carefully controlled measures to maintain secrecy. In this context, secrecy can function as an economic value in itself.

The economic importance of trade secret law has ballooned in recent years, particularly within innovation-driven industries. The decision to seek trade secret protection rather than patent protection is made by many enterprises either when they believe public disclosure of an innovation would simply give away a valuable insight to competitors, or when they believe their innovation does not satisfy the requirements for patentability. Indeed, unlike patents that provide exclusivity for a set period of years in exchange for public disclosure, the duration of protection for trade secrets may continue indefinitely, as long as the information remains secret.⁵⁵³ It is therefore not uncommon for companies to employ a mixed protection strategy of the two intellectual property forms: protecting one group of innovations with patents, while using trade secrets for proprietary know-how, business methods, and confidential technology information.

Protection for trade secrets, however, is intrinsically challenging precisely because its viability hinges upon maintaining secrecy. The potential for disclosure abounds, through disgruntled employees, joint venture partners, digital data breaches, industrial espionage, and

⁵⁵² World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 21–24 (WIPO, Geneva, 2024).

⁵⁵³ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 32–35 (WIPO, Geneva, 2024).

cyber-attacks.⁵⁵⁴ If an organization allows its confidential information to enter the public domain – even through inadvertent or accidental means – it will, in general, lose any opportunity for legal recourse in relation to it.

This is a significant contrast with many other forms of intellectual property rights, which will be available even after some form of public disclosure.

It is for these reasons that protecting trade secrets typically involves an organization actively establishing mechanisms by which that secrecy can be maintained.

This is where contractual protection plays a crucial role. Courts and governmental bodies will typically look at whether reasonable steps were taken to maintain confidentiality in assessing whether the protection for trade secret rights will apply.⁵⁵⁵ A company's corporate policy on confidential information, information access controls, computer security protocols, and the all-important confidentiality agreements (Non-Disclosure Agreements) demonstrate such efforts.

These measures serve not only to ensure information is not disclosed in unauthorized ways, but they also reflect the organization's intent and effort to ensure the information is treated in confidence.

In essence, contract law is one of the principal mechanisms by which trade secrets are created, maintained, and protected.

The increasingly central importance of the trade secret / contract law relationship reflects our increasingly collaborative innovation economy, the global nature of business, and the proliferation of electronic data transfer. As enterprises continue to rely more heavily upon their proprietary information and confidential know-how as assets, so legal mechanisms to govern access to, and the use and dissemination of, such information will inevitably continue to grow in their sophistication and necessity. To understand the modern approach to commercial confidentiality protection, a familiarity with the nature and application of Non-Disclosure Agreements is absolutely critical.

⁵⁵⁴ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 42–63 (WIPO, Geneva, 2024).

⁵⁵⁵ Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39(2)(c); World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 35–41 (WIPO, Geneva, 2024).

CONTRACTUAL GOVERNANCE OF CONFIDENTIAL INFORMATION

A. Evolution and Legal Nature of Non-Disclosure Agreements

The rising importance of information as a commercial asset has made a great deal of impact on the way companies have started managing legal risks. Because companies' businesses are increasingly relying on their proprietary information, expertise, technical knowledge, research information and business data. The traditional reliance upon trust and implied duties of confidence was no longer sufficient to address unauthorized disclosure risks. The NDA becomes one of the most fundamental contracted mechanisms to preserve confidential business information.

In the past, confidentiality had long been preserved based on other ways, such as fiduciary relationships, equity remedies or an implied duty of confidentiality.⁵⁵⁶ Law courts did acknowledge a situation where a person was able to obtain certain information which under an implicit understanding of maintaining confidentiality could not use it for a purpose other than authorized one.⁵⁵⁷ However as global transactions between businesses evolve and gain pace, it will certainly arise concerns regarding the degree of such confidentiality protection, the types of information which would be qualified to be referred to as 'confidential', and remedies applicable against parties' unauthorized disclosures. Consequently, parties began to include certain explicit contractual clauses on confidentiality protection within their contract. They act as a standard which all parties may rely upon on managing and using confidential information.

Over time, these clauses evolved into standalone confidentiality agreements commonly known as NDAs.⁵⁵⁸ Contrary to conventional legal contract clauses, they are designed to govern confidential information at the stage of its transmission, use, storage and protection. They lay down each party's rights and obligations prior to an exchange of confidential information hence there would be no ambiguity and potential disputes arising out. The growth of new collaborative models and a great dependence on information, NDAs has become one of the major means in business relationships in recent years.

⁵⁵⁶ Saltman Engineering Co. Ltd. v. Campbell Engineering Co. Ltd. (1948) 65 RPC 203.

⁵⁵⁷ Coco v. A.N. Clark (Engineers) Ltd. [1969] RPC 41.

⁵⁵⁸ Mark Anderson and Victor Warner, Confidentiality and Non-Disclosure Agreements 1–12 (Bloomsbury Professional, London, 2019).

At their essence, these NDAs function as a contract through which two or more parties reach a consensus to prevent each other from revealing specific information or using it except for specifically licensed uses. A NDA would look different according to the context of a specific transaction. For instance, if the NDA is one which is executed between a disclosure party who is revealing confidential information to other parties or parties. This unilateral type is common in employment or consultancy engagements. If all parties to the NDA are expected to exchange confidential information with each other, the contract is known as Mutual NDA and it is often seen in M&A transactions and joint venture activities or strategic partnerships. In some complex transactions involving more than one party, Multilateral NDA could be used instead.⁵⁵⁹

These NDAs are more than just a means for keeping secrets. They can also carry a legal and social regulatory function,⁵⁶⁰ offering a private governance mechanism in which the parties involved dictate their own standards of behavior as regards the sharing and handling of confidential information. Through a contract's terms and conditions, the NDA's parties will be empowered to set out guidelines for what would constitute 'confidential information', which persons would be authorized to be recipient of that information, what type of security should be in place, what would be the scope of permitted use, and what would happen to confidential information after the end of relationship (return or destroy). Accordingly, these agreements can serve as effective governance structures overseeing the information life cycle of sensitive information.

As the era of information comes, NDA plays a special and prominent role to help companies to have an efficient information flow amongst employees, consultants, business associates and investors. Businesses exchange commercially-sensitive information with their counterparts for the purpose of fostering the development of innovation, raising funds, performing transactions, and improving products. There is often a necessity of openness and reliance between parties for developing the business to grow, which is possible under the law for governing disclosure of information. Consequently, a NDA acts as a vehicle allowing the transaction and the flow of information, and it ensures confidentiality and prevents misuse of that information.

⁵⁵⁹ Mark Anderson and Victor Warner, Confidentiality and Non-Disclosure Agreements 25–35 (Bloomsbury Professional, London, 2019).

⁵⁶⁰ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 35–41 (WIPO, Geneva, 2024).

On top of that, with the development of various digital technologies such as cloud computing, virtual workplaces, AI and many other modern technologies, the importance of NDAs even extended to areas beyond the traditional business practices. Data can now be transmitted through a vast range of networks worldwide. Such kind of information transmission and distribution increases opportunities of hacking and security breaches that may reveal sensitive and proprietary business data. Hence, the NDA in modern age often incorporates additional terms related to online communications, data security standards, cybersecurity measures and electronic data management protocols to address the digital risks that arise in globalized business practices and technologies.

Given the significant relevance of NDAs, we can infer that protecting confidential information should not solely be an issue of legal enforceability but also effective mechanisms of governance and risk management. In the present world, there's rarely any secrecy that solely relies on just keeping secrets. Information protection is in many cases achieved through an ensemble of contracts, internal codes of conduct, technological tools and the legal framework, among which NDAs maintain their prominent role as a crucial instrument for establishing, overseeing and enforcing terms governing confidentiality. The evolution of NDA from merely a clause on confidentiality to an entire framework on information management speaks about how seriously information, once being regarded only as a means for securing commercial advantages, is considered today as one of the most valuable business assets.

B. Essential Components of Non-Disclosure Agreements

While NDAs serve the essential purpose of keeping information private, it is crucial to emphasize that the usefulness of NDAs rests on its specific wording. Confidentiality agreements are subject to intense judicial review to ensure that the obligations that they place upon a party are sufficiently certain, reasonable and capable of enforcement.⁵⁶¹ No matter how commercially valuable the confidential information may be, a poorly written agreement cannot offer adequate protection. Indeed, an NDA will be effective as a practical measure to the extent that the contracting parties have negotiated detailed contract clauses to govern the application and operation of their agreement to protect the secret information that has been disclosed.

⁵⁶¹ *Coco v. A.N. Clark (Engineers) Ltd.* [1969] RPC 41.

The definition of what is regarded as "confidential information" is undoubtedly the most important provision of the NDA⁵⁶² and represents the nucleus around which the rest of the agreement is centered. NDAs usually contain a blanket definition which includes "technical, commercial, financial, operational, or strategic information", but excessive broad definitions will inevitably invite confusion as to what exactly needs to be preserved. There is often a balance between defining too narrowly what can be regarded as the subject information and defining too widely. Several agreements also specify certain kinds of information which are expressly excluded from what constitutes a confidential disclosure. This includes information which is in the public domain, information independently developed by the other party to the agreement, and information which the other party has lawfully received from a third party.

The use of confidential information provision is arguably the next most important provision within an NDA.⁵⁶³ It allows the parties to define precisely the circumstances or for what purpose the disclosed information is intended to be shared between the parties. For example, in many commercial agreements information is shared by one party so that another party can assess and investigate a potential business relationship, conduct due diligence on the other party or to fulfill its duties pursuant to a binding contract or to assist with joint research activities. Such a clause, then, transforms the passive obligation of not disclosing information from non-disclosure agreements from one that just prohibits disclosure of information to an active limitation upon the way the information can be utilized.

Another critical element within NDAs is the provision relating to the permissible disclosures to which the confidential information may be disclosed to other persons. Generally, such provisions prohibit the sharing of information with third parties, but allow certain employees, legal professionals, auditors and other advisors of the parties to the agreement to gain access to the information to allow the parties to carry out due diligence or fulfill their respective legal or contractual obligations. In more modern NDA clauses, parties to NDAs are increasingly including provisions stipulating that individuals granted access to the confidential information by the receiving party must also be bound by confidentiality provisions. This can create a network or chain of contracts to safeguard disclosure of information.

⁵⁶² Mark Anderson and Victor Warner, *Confidentiality and Non-Disclosure Agreements* 45–52 (Bloomsbury Professional, London, 2019).

⁵⁶³ Mark Anderson and Victor Warner, *Confidentiality and Non-Disclosure Agreements* 53–67 (Bloomsbury Professional, London, 2019).

The duration for which the confidentiality provisions remain enforceable is also one of the most important clauses that must be included in an NDA.⁵⁶⁴ While some NDA will have fixed duration such as one or five years, others will simply stipulate that the confidentiality obligation must survive until the information has already become widely available through no fault of the contracting parties. Certain forms of confidential information such as trade secrets and technology-based intellectual property will justify a longer period of non-disclosure than more standard business information which may have little to no value after several months.

It is quite common for parties to include a clause which requires the returning and destruction or deletion of confidential information once the relationship between the parties ceases or terminates. This clause would specify that the receiving party shall cease to use and store the confidential information and return any documents, computer disks, prototypes and similar matter containing the confidential information to the disclosing party or shall dispose of any such information and provide confirmation of the same to the disclosing party. Given that in today's digital age that information may simultaneously exist across multiple computers, devices, servers and cloud networks, it has become important to require written notification of compliance.

A final provision that would often be encountered within an NDA clause include a section relating to legal matters such as choice of law, governing forum, methods for resolving disputes,⁵⁶⁵ security safeguards to prevent unauthorized use or dissemination of confidential information and adherence to data privacy regulations. Such provisions are especially crucial in cross-border commercial transactions in which the secret information might be sent between differing legal systems. They introduce certainty and predictability in an increasingly uncertain world.

Together, these components are far more than simply assurances of secrecy; they are structured mechanisms of governance concerning what constitutes confidential information, how it can be used, by whom it can be disclosed, how it must be safeguarded, and when it may be utilized or destroyed.

C. Non-Disclosure Agreements and Trade Secret Protection

⁵⁶⁴ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 35–41 (WIPO, Geneva, 2024).

⁵⁶⁵ American Cyanamid Co. v. Ethicon Ltd. [1975] AC 396.

There are few areas of law that involve as much overlap as contract law and intellectual property law with respect to the interaction between non-disclosure agreements and trade secret protection. Although trade secret law grants protection based on the idea of confidential information, confidentiality is often maintained with contractual terms that define the nature of protected information and regulate access and disclosure. NDAs function primarily as a means for protecting trade secrets by prohibiting the unauthorized divulgence or use of proprietary information by another party.

One of the central characteristics of trade secret protection is that it only continues as long as information remains secret. Whereas a patent holder protects their rights through disclosure to the public after registration and granting the patent, a trade secret holder relies on continued secrecy to maintain protection for their information. In order to obtain protection for information under trade secret law, the information must be demonstrated to have been made secret through the application of reasonable measures by the information owner to protect it from discovery.⁵⁶⁶ In most cases, a properly drafted NDA is one demonstration that the owner made a reasonable effort to prevent unauthorized disclosure.

NDAs can be particularly significant for employers and employees,⁵⁶⁷ where one party provides an employee access to a multitude of commercially valuable proprietary information, such as technical know-how, customer lists, business strategies, and research information. While the employer is concerned about protecting their commercially valuable secrets from being revealed or exploited by an employee in future employment, the employee has a right to remain free to pursue subsequent employment and to utilize their skills and experience that have been gained in the service of the employer. NDAs often seek to create a compromise between these interests and have become common provisions of employment contracts, especially in industries where confidential information is abundant. Likewise, Indian courts have underscored the contractual obligation of confidentiality. In *American Express Bank Ltd. v. Priya Puri*, the Delhi High Court acknowledged the imperative of safeguarding the company's private commercial data and in *V.F.S. Global Services Pvt. Ltd. v. Suprit Roy* the Bombay High Court stated that Confidentiality Agreements are primarily designed to preserve a Company's proprietary interest and data. These judgments reflect Indian court's increasing reliance upon contract law to enforce confidentiality.

⁵⁶⁶ Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39(2)(c).

⁵⁶⁷ *Faccenda Chicken Ltd. v. Fowler* [1987] Ch 117.

Non-Disclosure Agreements also play a critical role in transactions where information must be shared with third parties outside of an employment context. This includes sharing information during M&A transactions, joint ventures, licensing agreements, supplier negotiations, financing transactions, and research collaborations.⁵⁶⁸ Since many of these arrangements require disclosure of confidential information in order to conduct due diligence, these disclosures pose a significant risk of information misuse or breach of confidentiality, since the disclosures themselves could technically undermine the argument for confidentiality of the shared information. NDAs ensure that such shared information does not fall into the wrong hands while still permitting business necessary cooperation to take place.

In technology based businesses, much trade secret protection consists of information with intangible properties, such as software algorithms and source code, manufacturing processes, datasets, AI model parameters, and research methodologies. Given the value of the information represented in these components, any exposure of this information to third parties poses immediate risk to the company's competitive viability and requires meticulous efforts to prevent unauthorized disclosure. A company that requires outside information exchange and does not implement rigorous confidentiality agreements (whether NDAs, information sharing agreements, or NDAs for specific types of transaction) is highly likely to have unprotected trade secrets.

An analysis of many trade secret disputes has determined that for there to be protectable trade secrets under the applicable laws of any jurisdiction, reasonable measures of confidentiality must have been put in place by the owners of the alleged trade secrets. NDAs contribute greatly to demonstrating these measures, as do various other protocols such as restriction on who has access to the information in a company and internal training protocols. Thus, while breach of an NDA can lead to contract liability, the existence of an NDA can often lead to trade secret law protection for the information itself.

Of course, contracts cannot protect information against independent discovery by an outside party, reverse engineering by another company, or disclosure by someone who did not sign an NDA.

⁵⁶⁸ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 111–127 (WIPO, Geneva, 2024).

Moreover, courts may refuse to enforce overly burdensome or sweeping prohibitions that restrict an employee's career options unnecessarily.⁵⁶⁹

CHALLENGES OF CONFIDENTIALITY GOVERNANCE IN THE DIGITAL ERA

In an age of hyper-connectivity and rapid technological innovation, the nature of confidential information is continuously evolving – and so too are the methods by which such sensitive materials are stored, transmitted and disseminated. While traditional non-disclosure agreements (NDAs) continue to offer legal protection for confidential business assets, many have found it difficult to keep pace with the ways in which digital environments have rendered the notion of confidentiality fluid, dispersed and precarious, thereby altering the legal and practical realities of governance. Remote and hybrid work environments: The move to more decentralized work models naturally increases the risks to confidentiality.⁵⁷⁰

Many employees today access confidential information on personal devices, cloud-based services, or from remote locations, many of which have less stringent security controls than a corporate-controlled office.

The sharing of confidential data over virtual meeting platforms also creates a whole new set of potential leak points that need to be meticulously controlled and overseen, taking security from physical walls into the digital ether. Data, AI and NDAs Much of the progress and effectiveness of AI systems are built upon large quantities of data. When an organization incorporates proprietary data into a machine-learning algorithm, it presents significant risks to confidentiality and intellectual property⁵⁷¹ that are typically not covered by most NDAs. Intentionally ingested, coincidentally included in training sets or leaked through system architecture, dealing with confidential data as input to AI processes requires highly specialized contractual agreements to manage its usage and ensure it is properly anonymized, segregated or otherwise protected.

⁵⁶⁹ PepsiCo Inc. v. Redmond, 54 F.3d 1262 (7th Cir. 1995).

⁵⁷⁰ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 136–143 (WIPO, Geneva, 2024).

⁵⁷¹ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 141–145 (WIPO, Geneva, 2024).

International data sharing and confidentiality: In a worldwide business setting, it is usual to exchange confidential information beyond national borders.

However, the legal frameworks governing confidentiality, trade secrets and privacy regulations vary greatly from country to country.⁵⁷² This variance creates significant uncertainty as to the interpretation and enforcement of contractual provisions concerning confidentiality and use of information in different jurisdictions and runs the risk of jeopardizing the integrity of confidential information exchanged internationally. Cyber Security Threats and Information Governance The greatest threat to confidentiality is the escalation of the sophistication of cyber threats against corporate networks and sensitive data theft.

Hacking, phishing, ransomware or industrial espionage are all being used by malicious actors⁵⁷³ to exploit system vulnerabilities and circumvent even the most stringent NDAs to access and disseminate confidential information. Such examples serve to illustrate that breach prevention is a result of proactive and ongoing cyber security vigilance, robust access management, effective employee training and thorough incident response plans, not just contractual assurances between parties. Information governance needs to improve: These trends are a clear reflection that contractual mechanisms (e.g. NDAs) alone can no longer serve as the basis for an effective confidentiality governance strategy.

Although NDAs continue to be an important tool for creating a clear legal relationship, organizations in the digital age need to adapt by embedding NDAs into a broader and more dynamic information governance framework that is adaptable to fast-changing technology, work environments, and new risks.

CONCLUSION

Confidential information has grown to become arguably one of the most critical concerns in the current knowledge economy, a world where enterprise is heavily predicated on the successful stewardship of intellectual property and intellectual assets. For, an enterprise relying upon secret technical know-how, proprietary research data, client databases and strategic business plans

⁵⁷² World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 131–145 (WIPO, Geneva, 2024).

⁵⁷³ World Intellectual Property Organization (WIPO), WIPO Guide to Trade Secrets and Innovation 142–143 (WIPO

cannot achieve meaningful commercialization of its efforts without adequate and reliable legal safeguards against unauthorized revelation of its most important assets. In this globalized entrepreneurial climate, perhaps few documents have proven more ubiquitous than Non-Disclosure Agreements. As has been seen, an NDA can accomplish much more than simply stop the unauthorized disclosure of commercially sensitive information: it serves as an instrument of contractual governance to control the process of identification, management, sharing and protection of commercially viable material.

Indeed, by, for example stipulating particular contractual clauses for confidentiality, defining circumstances where disclosure can occur, specifying limits on access to such information, duration of its protection or even detailing remedies for its unauthorized use, an NDA can facilitate the growth of business relationships, without jeopardizing those interests being kept private, and with a commercial imperative in preserving secrecy, so very important when seeking to protect one's trade secrets. Also evident in the analysis in this chapter is the need to integrate contractual protection, for which NDAs can form one leg of the overall Information Security & Management Strategy framework that business must adopt with the technological solutions, the corporate cultures and the necessary organizational infrastructure designed to minimize opportunities for or prevent the release or exposure of confidential and proprietary information to unauthorized parties. The new world order of workplace realities (work from home), AI technology, cloud-based technology solutions, global information movement, and, inevitably more frequent cybersecurity risks has left the conventional approach to information confidentiality lacking for many of today's most business savvy organizations; as they now look towards establishing and putting in place effective governance with the aid of modern technologies to both enforce, as well as protect their intellectual property. Nonetheless, NDAs shall forever continue as an invaluable part of business relationships and the NDA continues to demonstrate how the value of information is in its secrecy and its strategic protection in a globalized economic era of ongoing innovation and transformation where trade secrets shall not diminish but will most undoubtedly continue to hold and yield their importance.

CHAPTER 15: TRADE SECRETS IN TECHNOLOGY, SOFTWARE AND DATA-DRIVEN BUSINESSES

BY SRISHTI ARORA

INTRODUCTION

In the twenty-first century information is seen as one of the most valuable assets in the global economy. Earlier companies relied on tangible assets to gain competitive advantage.⁵⁷⁴ However, with rapid technological changes and key advancements accompanying the growth of the world economy, the source of commercial success of the companies has now gradually shifted to intangible assets and proprietary know-how.

The act of protecting information has been around for a long time. Companies have used secrecy in order to maintain an edge over their competitors in the market place. Perhaps one of the best-known instances is the formula of The Coca-Cola Company⁵⁷⁵, which has remained secret for more than 100 years. The fact that this information has value not just because it exists, but because it has remained a secret, is illustrated by this example.

In today's digital economy the type of information that is commercially valuable has evolved considerably. Information is now seen as the new currency of business⁵⁷⁶, and firms now derive their value not only from the products they manufacture but also from what they know and what they can do with that information. Software, algorithms, source codes, databases, customer information, and models of analysis are some of the most valuable assets in modern

⁵⁷⁴ World Intellectual Property Organization, Trade Secrets: Policy Framework and Best Practices (WIPO 2022).

⁵⁷⁵ David S Almeling, 'Seven Reasons Why Trade Secrets Are Increasingly Important' (2012) 27(3) Berkeley Technology Law Journal 1091.

⁵⁷⁶ Organisation for Economic Co-operation and Development, OECD Digital Economy Outlook 2020 (OECD Publishing 2020)

organizations.⁵⁷⁷ Such intangible assets are often the outcome of several years of hard work and research undertaken by firms. As organizations have increased their dependency on information and technology, protecting such information is as important as developing it. In case of unauthorized exposure to any of the commercial secrets, years of work might go to waste. Hence, trade secrets play a very crucial role in protecting it. Unlike patents, where secrecy is traded away to obtain exclusivity, the value of trade secrets lies precisely in secrecy. Yet, the emergence of technologies and businesses involving software and information has brought into question the sufficiency of the old notions of trade secrets in safeguarding such modern forms of information.

Thus, Trade secret protection has become an inevitable component of success in this age of artificial intelligence, Internet and data-based decision making. This chapter eventually looks at how important trade secrets are becoming in technology and software companies and in data driven businesses. It also explores the challenges that come with protecting trade secrets which are very valuable to these businesses.

THE GROWING IMPORTANCE OF TRADE SECRETS IN DIGITAL ECONOMY

Value of Trade Secrets in Today's Business World

The digital economy has completely transformed the manner in which companies derive and obtain value. In many technology firms, competitive edge does not primarily lie in tangible assets or manufacturing abilities, but in proprietary knowledge, technical expertise, and data processing systems. Source code for software, algorithmic processes, customer analytics, machine learning models, and engineering know-how are just some of the highly valuable assets owned by the modern enterprises⁵⁷⁸. In this environment, trade secrets have become far more important than they ever were, and their role and scope has expanded well beyond their traditional association with formulas and manufacturing processes.

⁵⁷⁷ Jonathan Barnett, 'The Host's Dilemma: Strategic Forfeiture in Platform Markets for Informational Goods' (2009) 124 Harvard Law Review 1861.

⁵⁷⁸ World Intellectual Property Organization, Intellectual Property and Software (WIPO Publication).

Unlike traditional intellectual property rights, which are usually subject to the need for registration and publication, trade secrets allow companies to keep valuable information secret. This mechanism works well in industries where innovation and competition are high.

Technology firms rely on confidentiality for protecting information which cannot be patented and which is not intended to be shared with the competition. Confidential business information has become a tool for gaining an edge. The growing use of software, data and artificial intelligence has made trade secrets more important, thus making the area of trade secrets a broader concept. Companies are relying more on these secrets to stay ahead.

Today's corporations are not only dependent on inventions but highly developed know-how, innovations and as these innovations become more and more information-based, trade secrets have become an invisible foundation of digital companies. The role of trade secrets is no longer limited to the protection of single confidential pieces of information, but rather the protection of the very technology behind modern business. These assets increasingly encompass software source code, algorithms, datasets, artificial intelligence models and specialized technological expertise, all of which have become indispensable to the functioning of modern enterprises. Therefore, trade secrets have become a strategic asset which influences innovation, competition, and market power and poses serious questions about the appropriateness of trade secret laws for the realities of fast-developing technologies and innovation based on data.

Software and Source Code as a Valuable Intellectual Asset⁵⁷⁹

Software and its source code constitute some of the most valued information assets in the current economy. For technology companies, software represents much more than finished products offered to the customers, it embodies years of research, technical expertise and continuous development. The whole set of information such as source code, software design, programming interfaces, debugging techniques and development methodology can be viewed as valuable information giving the company an advantage. Consequently, software-related information has become subject of trade secret protection, which reflects the growing importance of intangible assets in modern business. Although, software enjoys copyright protection as a literary work as

⁵⁷⁹ World Intellectual Property Organization, Intellectual Property and Software (WIPO Publication).

per Article 10 of the TRIPS Agreement⁵⁸⁰ and the Indian Copyright Act.⁵⁸¹ This kind of protection is limited only to the actual expression embodied in the source code and does not extend to the underlying ideas, methods or functional principles. Patents protection⁵⁸² on the other hand is capable of stronger exclusivity, often requires public disclosure and may not always be available for software-related innovations. This limitation of the software patentability is stressed out in the case of *SAS Institute Inc. v. World Programming Ltd.* (Case C-406/10).⁵⁸³ decided by the Court of Justice of the European Union, It ruled that copyright protects the source code and object code of a computer program, but does not protect the program's functionality, programming language, or data format thereby, adding to the importance of trade secret protection as a means of protecting software-related information that gains its value because of its confidentiality.

The economic value of software extends beyond code itself and encompasses the value of the algorithms used in it, the architecture of the program, APIs, development processes & proprietary techniques that contribute to the efficiency and functionality of digital products.⁵⁸⁴

Consequently, many technology companies deliberately choose secrecy instead of patent protection.⁵⁸⁵ They do this to avoid disclosure and keep their competitive edge. Google's search algorithms, for instance, gain much of their economic value from staying confidential. This illustrates that software-related trade secrets include not just source code but also know-how that underpin digital products. With software systems becoming more advanced, sophisticated and interconnected with AI and data analytics, the significance of software-related trade secrets continues to expand. Their protection is no longer confined to preventing unauthorized copying; rather, it has become all about maintaining the ability of that technology to be innovative and stay ahead in the market thus gaining competitive advantage. In this sense, software-related trade

⁵⁸⁰ The Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 10

⁵⁸¹ The Copyright Act, 1957 (Act 14 of 1957), ss. 2(o), 13

⁵⁸² The Patents Act, 1970 (Act 39 of 1970), s. 3(k)

⁵⁸³ *SAS Institute Inc. v. World Programming Ltd.*, Case C-406/10, [2012] ECLI:EU:C:2012:259.

⁵⁸⁴ Sharon K Sandeen, *Trade Secret Law and Corporate Strategy* (American Bar Association 2015).

⁵⁸⁵ Michael Risch, 'Why Do We Have Trade Secrets?' (2007) 11 *Marquette Intellectual Property Law Review* 1.

secrets represent not merely legal rights but strategic assets that influence the competitive dynamics of the digital economy.

Protection of Know-how & Technical Expertise as Trade Secrets

The significance of trade secrets in technologically advanced business extends beyond software and source codes to encompass technical skills and expertise that contribute to the development or improvement of goods and services. For many businesses, the commercially valuable information is not necessarily documented or recorded on some database but consists of accumulated experience, engineering practices, manufacturing techniques and problem-solving capabilities. These technical skills are a result of many years of innovation and serve as a competitive advantage for companies functioning in narrow niches of the market. Unlike patents that provide legal protection to inventions through their publication, trade secret protection allows companies to retain confidential technical know-how without disclosing it to other companies. The economic value of technical expertise often lies not in the isolated pieces of information but in the manner in which this knowledge is used and refined over time. That is why many companies rely upon confidentiality agreements and internal security measures to protect their methods and procedures of work.

The significance of technological know-how in terms of law has been acknowledged in some jurisdictions through the court decisions. The courts have continuously distinguished between the general skill and experience acquired by employees and confidential information belonging to the employers. In the case of, *Faccenda Chicken Ltd. v. Fowler*⁵⁸⁶ established the significance of confidentiality of trade secrets and highly confidential information post the termination of employment in England. Also, courts in India recognize the value of protection of confidential information and technical know-how, as per the case of *John Richard Brady v. Chemical Process Equipments Pvt. Ltd.*⁵⁸⁷

With innovations in sectors such as artificial intelligence, semiconductors and manufacturing technology, competitive advantage increasingly depends upon specialized expertise and problem-solving capabilities rather than the ownership of physical assets.

⁵⁸⁶ *Faccenda Chicken Ltd. v. Fowler*, [1987] Ch 117 (CA).

⁵⁸⁷ *John Richard Brady v. Chemical Process Equipments Pvt. Ltd.*, AIR 1987 Delhi 372.

Accordingly, the trade secrets have evolved beyond protecting the concrete pieces of information and serve as an instrument in a way that preserves the technological capabilities that underpin innovation and market leadership in the economy.

Competitive Edge via Data and Analytics

Modern businesses are becoming driven by information and their capability to transform it into meaningful insights. Many industries today get their competitive advantage from being able to gather, process, and analyze large amounts of information. Customer databases, consumer behaviour data, market research and analysis represent important resources for companies which allow them to improve their operations, anticipate market trends and deliver personalized products and services. Consequently, business information and analysis have great commercial value today and are becoming protected through trade secret laws. That is why businesses turn to such laws to protect their data, analyses and business information systems. The protection of undisclosed information provided by Art. 39 of the TRIPS Agreement⁵⁸⁸ shows the recognition of valuable commercial information in international intellectual property law.

NETFLIX: A DATA- DRIVEN BUSINESS MODEL

Unlike traditional entertainment firms whose business model centers on producing and distributing content, Netflix's business model entails the application of data as a tool for decision-making. While people perceive Netflix as a service provider of movies and TV series, it uses the data as a tool for decision-making that makes Netflix stand out. Indeed, all interactions with Netflix provide some sort of data. All that data is analyzed through the use of algorithms and machine learning technologies in order to determine the things that users like. It is not simply guesswork or market research that guides the decisions of Netflix but data obtained about the consumers, helping the firm forecast consumer preferences, genres, potential markets, promotional activities and even investing in production of content. The value created by Netflix does not depend only on the consumers data that the company collects but mostly on the databases, analytical models and algorithms of recommendations that were formed for years and that have been improved continuously. These tools possess independent commercial value of

⁵⁸⁸ The Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39.

their own and are valuable due to the fact that they are confidential. This is why trade secret law is used by Netflix to protect its analytic capabilities without disclosing them as it would happen in case of obtaining patents.⁵⁸⁹

In other words, the increased reliance on innovation fueled by data has been associated with the notion of “data is the new oil.”⁵⁹⁰ The fact that data is useless until it is being analyzed and decisions are made based on it. In such cases, it is necessary for companies to preserve information since they rely on predictions and planning using the data. Therefore, trade secrets are vital for protecting data. It has been vital for the companies to use the analytic and data-based strategy. Therefore, it has become very important for the companies to protect their trade secrets and hence, they are indispensable for any business when they want to preserve the value of their information assets. At the same time, the concentration of valuable datasets and analytical abilities of the dominant digital platforms generates the problems regarding competition, market power, and the appropriate balance between innovation and access thereby adding a new dimension to contemporary debates surrounding trade secret protection.

The Influence of Artificial Intelligence on Trade Secret Protections

Perhaps no technological development has altered the landscape on trade secrets more profoundly than the development of artificial intelligence. While software programs rely on software systems for their worth, artificial intelligence models derive their value through the combination of software, data sets, and expertise used to develop and fine-tune them. Through such innovations, trade secrets have shifted from tools that protect individual snippets of information to those that protect entire technological ecosystems.⁵⁹¹ The development of machine learning models has always been a great investment of time, resources and technical expertise. Moreover, in addition to algorithms in source codes, machine learning models' success factors include proprietary datasets, architecture of the model, optimization and methods of improving performance. Such elements derive their commercial value from remaining confidential and may not always be suitable for patent protection because of the disclosure conditions of patents. In

⁵⁸⁹ Viktor Mayer-Schönberger and Kenneth Cukier, *Big Data: A Revolution That Will Transform How We Live, Work and Think* (John Murray 2013).

⁵⁹⁰ Clive Humby, “Data is the New Oil”, Association of National Advertisers (2006).

⁵⁹¹ World Intellectual Property Organization, *WIPO Technology Trends 2019: Artificial Intelligence* (WIPO 2019).

order to preserve the secrecy of their technology and competitive advantage, many technology corporations prefer the protection of trade secrets for AI-related information.

With the rise of artificial intelligence's economic significance, companies developing large language and generative AI models regard them as strategic assets and treat them in a way that protects the secrets related to training methods, model parameters and processes. Nevertheless, such an attitude towards secrecy raises worries about transparency and accountability. Artificial intelligence systems are used in various fields including medicine, finance and government, and they affect people's lives. Overreliance on trade secret protection can complicate any scrutiny and make it difficult to solve problems with AI bias, explainability and reliability.

The above-mentioned problems have become increasingly relevant as a result of the rise of regulation such as the European Union Artificial Intelligence Act 2024⁵⁹² which tries to ensure that there is transparency and accountability in the development and use of artificial intelligence technology. The tension between the commercial considerations of preserving secrecy of the information on the one hand and the social expectation of having transparent and accountable artificial intelligence on the other hand indicates that trade secret law cannot always address the realities of rapidly evolving technologies. In this sense, artificial intelligence challenges the adequacy of traditional trade secret law, as the need for commercial secrecy increasingly conflicts with demands for transparency, accountability and explainability.

WAYMO v. UBER: A GROUNDBREAKING TRADE SECRET LITIGATION IN THE TECHNOLOGY INDUSTRY

The Waymo LLC versus Uber Technologies Inc⁵⁹³. The case from 2018 illustrated the increasing importance of protecting trade secrets in the innovation driven industries. The dispute arose in the highly competitive autonomous vehicle market where companies need to keep their

⁵⁹² Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonized rules on artificial intelligence (Artificial Intelligence Act), OJ L 2024/1689 (2024).

⁵⁹³ Waymo LLC v. Uber Technologies Inc., Case No. 3:17-cv-00939 (N.D. Cal. 2017)

technology, software, algorithms and engineering designs confidential to stay ahead in the market.

The Waymo division of Alphabet Inc. which is the parent company of Google created technology for self-driving cars such as LiDAR (Light Detection and Ranging). This LiDAR technology is an advanced technology for self-driving cars which makes use of laser beams that aid self-driving cars detect and map out the environment. This is very essential in developing self-driving cars. Since this technology was commercially valuable and a lot of money was invested in developing this technology, Waymo kept the LiDAR as a trade secret.

The controversy between Waymo and Uber started when Anthony Levandowski, who was an engineer at Waymo, left his job and formed a new company named Otto which developed self-driving trucks. Anthony Levandowski took away a lot of confidential files that contained information relating to self-driving cars before leaving Waymo. Uber soon bought Otto and made Anthony Levandowski one of the members of Uber's self-driving car team. Waymo subsequently accused Uber of using their trade secrets and decided to file a lawsuit alleging Uber of trade secret theft & unfair competition.

The case attracted a lot of global attention as it was highlighting the growing vulnerability of the growing technological information in the digital economy. This was different, from the days when companies used to have their secrets written down on a paper. But now companies have confidential information stored on computers which can be copied and transferred to anyone in just a few minutes. This dispute demonstrated what can happen when one employee who knows all the company secrets decides to work for another competitive company thus, transferring years of research and development to the competitor.

The litigation dispute also exposed the tension between employee mobility and trade secret protection. And how Tech companies are always competing for highly skilled employees whose expertise can contribute to their innovations and when one such employee decides to switch between competing firms distinguishing personal experience from confidential trade secrets becomes highly difficult.

Although the case finally ended with a settlement in 2018. Uber agreed to give Waymo equity worth about \$245 million. They also promised not to use Waymo's technology. The significance

of Waymo v. Uber extends beyond the dispute itself. It highlights that trade secrets are highly essential for businesses that rely on technology. In such areas of business being ahead in the market often depends on keeping algorithms and software designs concealed. The Waymo v. Uber case also indicated that even though the old principles for trade secrets remain relevant, the new economy and new technology spawns difficulties. Hence, this case served as an example of both advantages and limitations of protection of trade secrets in modern tech, software and data driven businesses.⁵⁹⁴

CURRENT CHALLENGES IN TRADE SECRET PROTECTION AND THE PATH AHEAD

The Inadequate Existence of a Comprehensive Trade Secrets Legislation in India

Despite trade secrets having gained significance in technology and data-driven businesses, India does not have dedicated legislation to protect them.⁵⁹⁵ Unlike patents, copyrights and trademarks, the trade secrets are protected through contractual obligations and judicial precedents to avoid breach of confidential information. Indian courts have enforced rights over information in several precedents but there is no clear statutory framework on trade secrets, which creates uncertainty. This is especially important in the technology sector, where valuable business assets often consist of source codes, algorithms and customer information and not physical property. The lack of guidance from the legislature may lead to inconsistent approaches to protection and solutions. This position is evident from the decision in John Richard Brady v. Chemical Process Equipments Pvt. Ltd.⁵⁹⁶, where the Delhi high court highlighted the significance of protecting trade secrets through principles that are equitable and fair. However, just relying on what courts say instead of having a specific law may cause confusion for technology companies. In this regard India may benefit from a set of laws clearly defining trade secrets and providing remedies

⁵⁹⁴ Racquel Brown Gaston and J. Ndumbe Anyu, “The Case of Waymo v. Uber: The Detrimental Harm to the Evolution of Trade Secret Laws” (2020) 27 Journal of Business Cases and Applications 1

⁵⁹⁵ V K Ahuja, Law Relating to Intellectual Property Rights (LexisNexis 2017).

⁵⁹⁶ John Richard Brady v. Chemical Process Equipments Pvt. Ltd., AIR 1987 Delhi 372.

for misappropriation and providing greater certainty for businesses operating in knowledge-based industries.⁵⁹⁷

Employee Mobility and Misappropriation of Trade Secrets

The growing mobility of the workforce poses a serious problem for trade secrets in the technology and software industries. Development, engineering and data science specialists regularly change jobs in rival firms and there is always a danger that confidential information will be leaked either deliberately or accidentally. The difficulty has already been considered by courts as seen in the case of *Faccenda Chicken Ltd. v. Fowler*⁵⁹⁸ where the court made the difference between the skill set of the employee and confidential business information.

Ambiguity Concerning Digital Trade Secret Boundaries

The process of trade secret identification and definition has become much more complicated due to the digital economy era. Trade secret laws were initially formulated to cover formulas and processes, as well as methods of business operations. At the same time, contemporary companies have an array of intangible resources, including source codes, algorithms, machine learning techniques, data sets, recommendations engines and analytics. Continuous evolution and improvement of these technologies make the problem of defining the limits of confidential data rather complicated. In order to deal with the problem of trade secret definition and protection, it is necessary to have good documentation of confidential resources, classification by commercial value and regular updates of the trade secret inventory.

Achieving Confidentiality and Transparency in an Age of Artificial Intelligence

The rising need for transparency, accountability, and explainability in artificial intelligence raises an important problem of protecting trade secrets. With the rising influence of AI in industries like medicine, finance, and governmental affairs, regulators and consumers become interested in understanding the principles of work of AI algorithms. On the other hand, companies often consider data sets, AI architecture, and the methods used in training algorithms as trade secrets that should remain confidential. The problem takes on additional significance in light of recent

⁵⁹⁷ The Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39.

⁵⁹⁸ *Faccenda Chicken Ltd. v. Fowler*, [1987] Ch 117 (CA).

regulatory initiatives such as the EU Artificial Intelligence Act that focuses on transparency in certain kinds of AI systems. A balance between both aspects thus makes it necessary.⁵⁹⁹

Cybersecurity Risks and Theft of Trade Secrets

The growing digitization of business data makes trade secrets more susceptible to hacking, cyber-espionage and other kinds of cyber threats. Unlike the old confidential information which was usually stored physically, modern trade secrets like source codes, datasets and artificial intelligence models are kept in the form of digital data and can be copied or transmitted relatively easily. With the growth of dependence on the cloud and other forms of digital infrastructure, the threat is becoming bigger. Therefore, businesses have to implement strong cybersecurity measures in order to protect confidential information from getting into the hands of competitors.⁶⁰⁰

One may clearly see that protecting trade secrets has become very complicated in the era of digitization. Even though the basic elements of secrecy and economic value still retain their relevance, technological developments have brought along new challenges concerning employee mobility, cyber security, artificial intelligence and digital trade secrets. Resolving such issues necessitates not only proper protection through the law but also active organizational efforts and a balanced regulation strategy. In this respect, it is evident that the protection of trade secrets needs to keep up with technological development.

CONCLUSION

The discussion in this chapter shows that the concept of trade secrets is crucial to the operation of technology, software and data-driven businesses. The importance of trade secrets at present goes way beyond confidential business information in the traditional sense and covers software, algorithms, data sets, artificial intelligence, proprietary know-how and everything else which contributes to the competitive advantage in the digital economy. It becomes apparent from the

⁵⁹⁹ Frank Pasquale, *The Black Box Society* (Harvard University Press 2015).

⁶⁰⁰ Christopher Rebel J Pace, 'The Case for a Federal Trade Secrets Act' (1992) 8 *Harvard Journal of Law and Technology* 427

analysis of the evolution of business and the development of law that trade secrets have turned into fundamental assets.

At the same time, the inclusion of the concept of trade secrets into the digital world created numerous issues related to mobility of employees, cybersecurity, artificial intelligence and international aspects of trade secrets enforcement. It seems clear from such a development that although the traditional approach to trade secret law is still pertinent, it becomes increasingly challenged by the changes in the world of technology. Finally, the success of trade secret law is in preserving innovation and business value but also in finding the right balance.

CHAPTER 16: CROSS- BORDER PROTECTION AND INTERNATIONAL TRADE SECRET DISPUTES

BY RASHI DEULKAR

INTRODUCTION

Trade secrets are among the most valuable yet vulnerable types of intellectual property in the global economy. They are unique when compared to patents, copyrights, and trademarks as they derive their value from confidentiality, and once they are disclosed, they lose their value. Cloud computing, generative AI technologies and remote work have increased the amount of commercially sensitive information that is generated, processed and transmitted across borders through digital means. India being a major digital hub, Indian companies develop and deal with valuable and confidential information belonging to both domestic and foreign clients. And yet, it lacks dedicated legislation for trade secrets and depends upon scattered statutory provisions and principles for protecting confidential business information.

This structural mismatch between India's integration into the global digital economy and its non-statutory legal framework becomes more apparent in cross-border trade secret disputes. Although instruments such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) obliges member states to provide protection for undisclosed information, it leaves considerable discretion regarding the form of implementation and does not harmonise rules governing jurisdiction, applicable law, recognition of foreign judgments, or cross-border enforcement. Several major jurisdictions, such as the United States through the Defend Trade Secrets Act, the European Union through the Trade Secrets Directive, and China through amendments to its Anti-Unfair Competition Law, have adopted comprehensive legal frameworks with robust mechanisms.

Against this backdrop, this chapter looks at whether India's current framework is adequate to protect Indian companies in cross-border misappropriation or does India's reliance on

confidential relationship and contractual theories combined with an underdeveloped legal framework actually leave Indian enterprises vulnerable. The analysis therefore examines India's doctrinal foundations, the international and comparative framework, and the practical operation of jurisdiction, applicable law and enforcement in cross-border scenarios, before suggesting reforms that could move India from a vulnerable participant to a more secure and credible jurisdiction for trade secret protection.

CONCEPTUAL AND LEGAL FOUNDATIONS

Trade secret protection is generally based on three theories, property theory, which treats trade secrets as a proprietary interest deserving legal protection; unfair competition theory, which focuses on preventing the wrongful misappropriation or misuse of confidential information; and confidential relationship theory, which protects trade secrets based on express or implied duties of confidentiality arising between parties.

Indian law best fits this third confidential relationship theory. Presently, India lacks any particular law dealing with trade secrets and does not have a general statutory definition of either "trade secrets" or "undisclosed information" as per TRIPS terminology. Rather, the Indian courts have made use of a combination of contract law provisions under the Indian Contract Act 1872, along with other equitable doctrines and action based upon breach of confidence, for the protection of unauthorized use or disclosure of confidential information. In the case of *Diljeet Titus v Alfred A. Adebare*, the Delhi High Court has held that courts can step in and stop a breach of confidence on grounds of equity even when there is no intellectual property involved because of the implication of the obligation of confidence due to the nature of the professional relationship.⁶⁰¹ In *American Express Bank Ltd v Ms Priya Puri*, the Delhi High Court has had to strike a balance between an employer's need to protect customer information and an employee's right to practice his profession using the provision of Section 27 of the Contract Act.⁶⁰²

The above approach appears to work fairly well in the context of domestic disputes where both the relationship and the alleged breach are located within India. The problem arises, however, in situations where trade secrets are used in other jurisdictions or in circumstances where they are

⁶⁰¹ *Diljeet Titus v. Alfred A. Adebare*, 130 (2006) DLT 330 (Del).

⁶⁰² *American Express Bank Ltd. v. Ms. Priya Puri*, CS (OS) No. 1442/2005 (Del).

misappropriated in ways that are not easily classified within an existing relationship. Where there is an international aspect involving cross-border transmission of confidential information through intermediaries in different jurisdictions, it might become difficult to show any breach of relationship-based duty in order to make a case for breach of confidentiality under Indian law.⁶⁰³ Furthermore, where disputes arise out of a contract and are litigated or arbitrated outside India, foreign courts applying their own conflict of laws rules might not be interested in establishing Indian equity principles, especially if there was no statutory provision available for such disputes.⁶⁰⁴

INTERNATIONAL FRAMEWORK AND COMPARATIVE SNAPSHOT

At the international level, the TRIPS Agreement is the minimum standard for the protection of trade secrets. According to Article 39, members of the WTO are obliged to provide protection for “undisclosed information” which is confidential, has commercial value because of its confidentiality, and is protected by measures reasonably adequate to ensure its confidentiality, and thereby the three-element test mentioned above is created.⁶⁰⁵ The problem is that TRIPS does not specify how exactly such protection should be achieved, and the TRIPS Agreement contains no provisions on jurisdiction, applicable law, and judgment recognition and enforcement in trade secret cases. This fact is very important in international disputes as it gives countries a great opportunity to differ in respect of the definition of the right of protection of trade secrets, available remedies, and extraterritoriality of the national courts.

Article 10bis of the Paris Convention requires that states provide adequate protection against unfair competition and trade secrets constitute acts of unfair competition.⁶⁰⁶ Further, there have been efforts at WIPO level for developing soft-law instruments and training materials relating to trade secrets aimed at good practices in trade secret management, structuring of contracts, and dispute resolution processes; however, these are not legally binding and need to be implemented

⁶⁰³ Pravin Anand and Rohil Bansal, “India”, Trade Secrets 2026, Chambers and Partners, available at: <https://practiceguides.chambers.com/practice-guides/trade-secrets-2026/india> (last visited on July 10, 2026).

⁶⁰⁴ Trade Secret Protection in India: The Policy Debate, available at: <https://wtocentre.iift.ac.in/workingpaper/Trade%20Secret%20Protection%20in%20India-%20The%20policy%20debate.pdf> (last visited on July 10, 2026).

⁶⁰⁵ The Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39(2).

⁶⁰⁶ The Paris Convention for the Protection of Industrial Property, 1883, art. 10bis.

through domestic legislation.⁶⁰⁷ It may thus be stated that actual contours of trade secret protection across borders are dependent on national/regional regimes. The most pertinent countries for comparative purposes are the United States of America, European Union, and China.

In the US, the Defend Trade Secrets Act 2016 (DTSA) provided an additional federal civil cause of action for trade secret misappropriation alongside state law remedies.⁶⁰⁸ The DTSA incorporates a TRIPS-style definition of the term “trade secret”, has extensive procedural devices such as ex parte seizure orders in exceptional circumstances, and provides for compensatory damages and exemplary damages in case of wilful and malicious misappropriation.⁶⁰⁹ Most importantly for transnational disputes, recent case law, including the decision of the Seventh Circuit in *Motorola Solutions v Hytera Communications*, has construed the DTSA in combination with the extraterritoriality provision of the Economic Espionage Act to enable claims of recovery for foreign misappropriation associated with acts “in furtherance” of the offence in the US territory, thereby creating transnational scope for the legislation.⁶¹⁰

In the European Union, the Trade Secrets Directive of 2016 harmonizes significant elements of civil trade secret protection in the Member States.⁶¹¹ It defines “trade secret” in terms similar to TRIPS, establishes minimum standards for injunctions, damages and delivery up of infringing products, and focuses extensively on confidentiality of trade secrets in dispute proceedings, e.g. by providing for limited access hearings and restrictions on disclosure of sensitive information in court filings. Although jurisdiction and applicable law in cross-border trade secret claims are determined according to the Brussels I Recast Regulation and the Rome II Regulation, rather than by the Directive, recent scholarship addresses questions of their application to such claims, and highlights interpretation possibilities and gaps thereof.⁶¹²

⁶⁰⁷ WIPO Innovation Guide, available at:

https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_inn_ge_19/wipo_inn_ge_19_p3.pdf (last visited on July 10, 2026).

⁶⁰⁸ The Defend Trade Secrets Act, 2016, 18 U.S.C. §§ 1836–1839.

⁶⁰⁹ Pravin Anand and Rohil Bansal, “India”, Trade Secrets 2026, Chambers and Partners, available at: <https://practiceguides.chambers.com/practice-guides/trade-secrets-2026/india> (last visited on July 10, 2026).

⁶¹⁰ *Motorola Solutions, Inc. v. Hytera Communications Corp. Ltd.*, 108 F.4th 458 (7th Cir. 2024).

⁶¹¹ WIPO Lex—Trade Secrets Legislation, available at: <https://www.wipo.int/wipolex/en/legislation/details/16435> (last visited on July 10, 2026).

⁶¹² Cross-Border Trade Secret Disputes in the European Union: Jurisdiction and Applicable Law, available at: <https://eapil.org/2023/10/05/cross-border-trade-secret-disputes-in-the-european-union-jurisdiction-and-applicable-law/> (last visited on July 10, 2026).

One of the most important jurisdictions in the sphere of technology and manufacturing disputes, China primarily relies on the Anti-Unfair Competition Law to protect trade secrets. They are defined in the said act as technical or operating information which is not known to the public, is valuable and subject to measures ensuring confidentiality.⁶¹³ This Act provides for administrative penalties, civil liability and, potentially, criminal sanctions in serious cases. Practices of enforcement have been developing recently, with an increasing number of instances when courts were willing to issue injunctions, recognize different types of confidential information and award damages, even in disputes involving foreign entities.

The Indian scenario is clearly distinct from the above statutory frameworks. As mentioned before, there is no specific legislation regarding trade secrets in force in India; however, trade secret protection can be gained through contract law, breach of confidence under equity, and certain provisions of the law. The recent work done by the Law Commission of India on trade secrets and economic espionage along with the draft Protection of Trade Secrets Bill 2024 recognizes the problem and suggests adopting sui generis legislation but it is yet to be adopted.⁶¹⁴

CROSS- BORDER SCENARIOS AND INDIAN VULNERABILITIES

Employee Mobility and Post- Employment Misappropriation

A common trade secret dispute in India involves a departing employee taking confidential information, such as source code or customer databases, to a foreign competitor. For instance, an engineer leaving an Indian IT company for a Singaporean or US-based firm may use proprietary software or know-how, raising complex cross-border enforcement issues.

Indian courts have intervened in similar situations. For instance, in *American Express Bank Ltd v Ms Priya Puri*, the Delhi High Court held that customer information and wealth management strategy can amount to confidential information but rejected a general employment restraint

⁶¹³ Chinese Trade Secret Regulations, available at: https://www.afdip.com/China_IP_Laws/Others/Laws_Regulations/2025/0806/2131.html (last visited on July 10, 2026).

⁶¹⁴ Department for Promotion of Industry and Internal Trade Report, available at: <https://cdnbbsr.s3waas.gov.in/s3ca0daec69b5adc880fb464895726dbdf/uploads/2024/03/202403061982318841.pdf> (last visited on July 10, 2026).

because such agreements were void under Section 27 of the Contract Act.⁶¹⁵ In *Diljeet Titus v Alfred A Adebare*, confidential information was protected under the duty of confidence arising out of the particular relationship of the parties.⁶¹⁶ Lastly, in *Arjan Dugal & Anr v Shubham Gandhi & Anr*, the Delhi High Court granted an ex parte ad interim injunction restraining a former employee from misappropriating the client database and proprietary design methodology to start a competing business.⁶¹⁷

The problem arises where the competitor and the employee are based outside India. In such a situation, the Indian courts have to rely on general provisions of the Code of Civil Procedure to exercise personal jurisdiction over the defendants, which are outdated and were not intended for digitally mobile, cross-border disputes and contain no trade-secret-specific rules.⁶¹⁸ Even in the case of issuance of such injunctions, their practical implementation will be determined by the law of recognition and enforcement in the jurisdiction of the defendants. Most importantly, Section 27 imposes certain structure limitations on post-employment restraints, such as Indian courts regularly invalidating wide-ranging non-compete or non-solicitation agreements, even where they are presented in form of confidentiality agreements, while other legal regimes such as DTSA or EU Trade Secrets Directive apply reasonableness test in order to evaluate such agreements.⁶¹⁹

Another difference in the regimes can be exemplified by ex parte seizure remedy provided in the DTSA. This provision was intentionally formulated as an instrument to use in emergency situations in order to prevent the defendants from leaving the jurisdiction and/or disclosing trade secrets rapidly.⁶²⁰ The situation with the Indian employer in case of similar event, such as, departure of engineer to another country with confidential code is much less favourable, because it can use only interim injunctions under Order 39 CPC, which ordinarily involves notice and

⁶¹⁵ *American Express Bank Ltd. v. Ms. Priya Puri*, CS (OS) No. 1442/2005 (Del).

⁶¹⁶ *Diljeet Titus v. Alfred A. Adebare*, 130 (2006) DLT 330 (Del).

⁶¹⁷ *Mr. Arjan Dugal & Anr. v. Mr. Shubham Gandhi & Anr.*, CS(COMM) 918/2025 (Del).

⁶¹⁸ Chandni Raina, Trade Secret Protection in India: The Policy Debate (Working Paper, Centre for WTO Studies, Indian Institute of Foreign Trade, New Delhi, Sept. 2015), available at: <https://wtocentre.iift.ac.in/workingpaper/Trade%20Secret%20Protection%20in%20India-%20The%20policy%20debate.pdf> (last visited on July 10, 2026).

⁶¹⁹ Pravin Anand and Rohil Bansal, “India”, Trade Secrets 2026, Chambers and Partners, available at: <https://practiceguides.chambers.com/practice-guides/trade-secrets-2026/india> (last visited on July 10, 2026).

⁶²⁰ Extraterritorial Application of the DTSA: Recent Decision Continues to Develop Act-in-Furtherance Element, available at: <https://www.commerciallitigationupdate.com/extraterritorial-application-of-the-dtsa-recent-decision-continues-to-develop-act-in-furtherance-element> (last visited on July 10, 2026).

regular civil proceedings. Moreover, in some cases it may also file criminal complaints in accordance with Article 66 of the Information Technology Act.⁶²¹ By the time relief is obtained, the information may already be integrated into a foreign competitor's product, leaving the Indian firm dependent on foreign law and forums to secure effective protection.

Cloud Computing and AI Data Leakage: The Jurisdiction Void

Another common scenario arises from India's role as a hub for outsourced software development and data processing. Confidential data or AI models developed for foreign clients may be stolen by insiders or through cyberattacks and transferred to third parties abroad, resulting in trade secret misappropriation across multiple jurisdictions.

Modern cloud infrastructure systems duplicate and distribute the data into many centres; clients do not know where their data is physically stored at any moment in time. In terms of trade secret, the place of misappropriation becomes genuinely uncertain. Attribution is complicated when there are offshore or anonymous hackers involved, and once the data is disclosed, the status of trade secret can be irretrievably lost even theoretically.⁶²²

Indian legislation is ill-equipped to deal with such cases within the context of trade secret protection. There is no misappropriation statute concerning confidential data; there is no coherent misappropriation doctrine designed for international cloud-based cybertheft. The provisions of the Information Technology Act regarding unauthorised access and data copying were intended to regulate cybercrimes in general and give absolutely no hint on which jurisdiction's laws to apply, how to obtain the proof from foreign servers, and how to enforce the injunctive relief ordered by an Indian court on foreign cloud operators.⁶²³

AI-related trade secret disputes present additional challenges because Indian law has not yet clearly addressed whether AI assets such as training datasets, algorithms, or model weights qualify as trade secrets. Courts must apply traditional principles distinguishing an employee's skill and experience from an employer's confidential information to these new forms of

⁶²¹ The Information Technology Act, 2000 (Act 21 of 2000), s. 66.

⁶²² Cross-Border Trade Secret Disputes—CIGI Paper, available at: <https://www.cigionline.org/static/documents/documents/no.253.pdf> (last visited on July 10, 2026).

⁶²³ The Information Technology Act, 2000 (Act 21 of 2000).

intangible assets. As a result, protection often depends on the claimant's ability to establish the confidential nature and commercial value of the AI-related information.⁶²⁴

JURISDICTION AND APPLICABLE LAW

Jurisdictional Challenges: India's Framework and its Limits

Civil jurisdiction in India is governed by the Code of Civil Procedure, 1908, which determines jurisdiction based on the defendant's residence or place of business or where the cause of action arose. While these rules work well for domestic trade secret disputes, they are inadequate for cross-border cases involving remote work, cloud computing, and international data transfers, as the CPC contains no special provisions addressing such issues.

The Supreme Court in *Modi Entertainment Network & Anr. v. W.S.G. Cricket Pte Ltd.*, endorsed the principle that Indian courts possess the equitable power to restrain litigants from instituting proceedings in foreign courts, while stressing that such power is not to be lightly utilized and should take into account considerations of comity.⁶²⁵ The Court formulated a number of principles that apply in this situation, among which include the fact that the defendant must be within the reach of the jurisdiction of the Indian court; the fact that an injunction will be granted only if injustice will be prevented thereby; and that if parties have agreed upon jurisdictional clauses in their agreements, it becomes the responsibility of the party opposing the chosen forum to demonstrate that the chosen forum is a non-convenient one or the proceedings are oppressive.⁶²⁶

Modi Entertainment is instructive in two ways for trade secrets. First, it confirms that India's cross-border jurisdictional reach is exercised through equitable discretion rather than through a rules-based statutory framework. This approach may come at the expense of predictability, a necessity when foreign parties have to consider the risk of disclosing confidential information to

⁶²⁴ India's Missing Trade Secrets Law: Why We Urgently Need Protection, available at: <https://www.theippress.com/2026/02/27/indias-missing-trade-secrets-law-why-we-urgently-need-protection/> (last visited on July 10, 2026).

⁶²⁵ *Modi Entertainment Network & Anr. v. W.S.G. Cricket Pte. Ltd.*, (2003) 4 SCC 341.

⁶²⁶ *Modi Entertainment Network & Anr. v. W.S.G. Cricket Pte. Ltd.*, (2003) 4 SCC 341.

an Indian entity.⁶²⁷ The other is that the dispute at hand involved a business agreement containing a choice of jurisdiction clause, something that provided a starting point for the Court's deliberation. In many of the employee-mobility and cloud-leakage scenarios from Section 4, there may be no such clause, for example, where the misappropriator is an employee rather than a contracting party, or where the third-party recipient of stolen information has no contractual relationship with the Indian plaintiff.

On the other hand, the framework set out by US and EU law is much more rigorous. The US federal courts, operating under the DTSA, use the "long-arm statute" doctrine of state law as well as the "minimum contact" doctrine of the constitution for exercising personal jurisdiction against foreign defendants whose activities impact commerce within the US; and this doctrine has been liberally used in trade secret litigation cases, even cases dealing with remote working and foreign persons.⁶²⁸ In Europe, the Brussels I Recast Regulation provides tort-specific jurisdiction under Article 7(2) for claims brought "in the courts for the place where the harmful event occurred"; this has been subject to controversy but is nonetheless a legislative tool for the purposes of trade secret misappropriation.⁶²⁹

Choice of Law: The Absence of a Governing Rule

The question that arises next is what substantive law applies in the case of misappropriation; in other words, the law of which country decides whether the information comes under the ambit of trade secrets, whether the conduct of the defendant constitutes misappropriation, and what is the remedy available. The Indian private international law, which is essentially based on common law principles, has had a lot of experience with choice of law in tort but without a statute similar to Rome II. Indian courts have referred to English notions of dual actionability and proper law, with decisions often leaning towards the *lex loci delicti* (law of the place of the wrong) while also considering the overall circumstances to identify the most appropriate governing law.⁶³⁰

⁶²⁷ India's Missing Trade Secrets Law: Why We Urgently Need Protection, available at: <https://www.theipress.com/2026/02/27/indias-missing-trade-secrets-law-why-we-urgently-need-protection/> (last visited on July 10, 2026).

⁶²⁸ Effron, Robin, Trade Secrets, Extraterritoriality, and Jurisdiction (December 1, 2016). Wake Forest Law Review, Vol. 51, No. 6, 2016, Brooklyn Law School, Legal Studies Paper No. 475, Available at SSRN: <https://ssrn.com/abstract=2896137>.

⁶²⁹ Regulation (EU) No. 1215/2012 (Brussels I Recast), art. 7(2).

⁶³⁰ Arindam Shit, Gayatri Prasad Birabara and Venkata Sai Revanth Rao Maddi, "Requisite Reformation on Double Actionability in English Law: The Debate of *Lex Fori* and *Lex Loci Delicti*" II Indian Journal of Integrated Research

However, when it comes to more complicated cross-border disputes, commentators typically prefer the “closest connection” test, considering multiple factors, such as the place of the injury, the place of the wrongful conduct, domicile, and center of the relationship of the parties.⁶³¹ But, for trade secrets, these factors do not tend to lead to one answer. In a situation of cloud leakage, the access may happen in India, while servers would be located in Ireland or the USA, the injury would be sustained by an EU client, and the misappropriator would come from a totally different state. *Lex loci delicti* suggests that Indian law should apply, but Indian breach-of-confidence doctrine cannot address cloud-based misappropriation involving multiple parties. The place-of-injury approach may provide a solution, but it would be detached from the place of the conduct. And despite the flexibility of the closest connection analysis, courts lack any trade-secrets-specific guidance on how to deal with conflicting contacts.

The EU, however, at least offers a statutory starting point. Article 6 of the Rome II Regulation suggests that the law of the state where the competitive relations or interests of groups of consumers are harmed should apply in unfair competition cases, which may sometimes include trade secret disputes.⁶³² There is no similar provision in the Indian PIL system. In cases of contractual relationships, the parties are able to select the law that would apply based on the NDA or the outsourcing agreement, and the Indian courts would recognize that choice. The major problem arises with non-contractual cases of cyber intrusion, third-party recipients, or chain misappropriation, where there is no such clause.

The combined effect of jurisdictional uncertainty and choice-of-law gaps is significant. For an Indian IT firm whose proprietary software has been misappropriated by a foreign competitor with whom it has no direct contract, the path to a domestic remedy requires: (i) establishing personal jurisdiction over the foreign defendant under general CPC rules (discretionary and uncertain); (ii) obtaining interim relief under Order 39 CPC (notice-based and time-consuming);

in Law 398–417 (2022), available at: <https://ijirl.com/wp-content/uploads/2022/05/REQUISITE-REFORMATION-ON-DOUBLE-ACTIONABILITY-IN-ENGLISH-LAW-THE-DEBATE-OF-LEX-FORI-AND-LEX-LOCI-DELICTI.pdf> (last visited on July 10, 2026).

⁶³¹ Yamini Atreya, "International Framework for the Protection of Trade Secrets" 11 *International Journal of Creative Research Thoughts* a123-a135 (2023), available at: <https://ijcrt.org/papers/IJCRT2303019.pdf> (last visited on July 10, 2026).

⁶³² Regulation (EC) No. 864/2007 of the European Parliament and of the Council on the law applicable to non-contractual obligations (Rome II), 2007, art. 6.

and (iii) persuading the court that Indian law governs the substance of the claim (analytically contested, with no statutory rule to anchor the argument).

ENFORCEMENT CHALLENGES

Evidence Gathering: The Cross- Border Evidentiary Problem

Indian procedural law addresses cross-border evidence mainly through letters rogatory and Mutual Legal Assistance Treaties (MLATs). MLATs, in particular, are aimed at facilitating international criminal investigations and are not well-suited to the process of regular civil litigation over trade secrets. It should also be noted that in accordance with the WIPO guide to trade secret litigation, modern systems use a combination of procedural tools (such as confidentiality rings, sealed process, and controlled access to evidence) in order to balance the need for secrecy and adjudication by the courts of law.⁶³³ The Indian civil procedural law contains no provisions specific to trade secrets and evidence preservation/discovery in relation to trade secrets.

It can be said that the difference from the US procedural law is especially great. As far as US federal discovery rules go, a very broad compulsory document and electronically stored information production is allowed, with only ordinary limitations being relevance and privilege.⁶³⁴ That makes it easier for plaintiffs to trace copying, identify downloads, and link suspicious activity to a competing product. The Indian plaintiff litigating in India has no such instrument; moreover, the delay associated with obtaining interim order can leave little or no trace of the evidence behind.

Extraterritorial Enforcement: The Hytera Contrast

In *Motorola Solutions, Inc. v Hytera Communications Corp. Ltd*, the Seventh Circuit affirmed a large award against trade secret violations and construed the DTSA as having extraterritorial

⁶³³ WIPO Guide to Trade Secrets and Innovation—Trade Secrets in Litigation, available at: <https://www.wipo.int/web-publications/wipo-guide-to-trade-secrets-and-innovation/en/part-v-trade-secrets-in-litigation.html> (last visited on July 10, 2026).

⁶³⁴ NYSBA Special Committee Cross-Border Evidence Guidelines, available at: <https://nysba.org/wp-content/uploads/2021/11/01-17-2019-NYSBA-Special-Committee-Cross-Border-Evidence-Guidelines.pdf> (last visited on July 10, 2026).

application where there was an act in furtherance of the trade secret violation in the US.⁶³⁵ This case is crucial as it clarifies that the owner of the trade secret can sue in the US notwithstanding that the greater part of the wrong has occurred elsewhere, so long as there is a sufficient nexus with the US.

Indian companies have two sides of the same coin here. The trade secret owner which is an Indian company whose trade secrets are stolen by a competitor who later markets the product in US trade shows may institute suit under the DTSA in US federal courts, thus obtaining discovery and remedies which cannot be obtained domestically. Likewise, Indian companies who handle the US clients' confidential information might become subject to a DTSA suit in US courts for acts which took place primarily in India but could still have connections to the US. In both scenarios, the applicable law is American and not Indian. There is no statutory counterpart to the extraterritorial application in the Indian legal system. The unauthorised access provision and the general criminal law provision of the Information Technology Act were not enacted in consideration of the extraterritorial trade secret misappropriation and the federal enforcement structure of the Economic Espionage Act of the US.⁶³⁶

Foreign Judgments and Reciprocity

The recognition and enforcement of foreign judgments in India are regulated by Sections 13, 14, and 44A of the Code of Civil Procedure. Judgments of reciprocating territories are entitled to a simplified execution procedure, while judgments of non-reciprocating territories necessitate new proceedings in India or the utilization of the foreign judgment as an evidentiary material in the subsequent lawsuit. The USA, which stands a high chance of being the country in which a judgment would be rendered under the DTSA, is not a reciprocating territory. An Indian company, having obtained a judgment in the US in relation to a trade secret dispute, would therefore have to go through another round of litigation in India in order to make such a judgment actionable.

⁶³⁵ *Motorola Solutions, Inc. v. Hytera Communications Corp. Ltd.*, 108 F.4th 458 (7th Cir. 2024).

⁶³⁶ Extraterritorial Application of the DTSA: Recent Decision Continues to Develop Act-in-Furtherance Element, available at: <https://www.commerciallitigationupdate.com/extraterritorial-application-of-the-dtsa-recent-decision-continues-to-develop-act-in-furtherance-element> (last visited on July 10, 2026).

Nevertheless, enforcement may still be obstructed in accordance with the usual section 13 criteria, such as non-examination of merits or violation of natural justice. Trade secret injunctions pose a particular challenge due to the requirement for Indian courts to apply the general injunction principles instead of any specific principles for the recognition of injunction orders relating to trade secrets. However, the opposite problem is similarly restrictive since foreign courts applying their own criteria for recognizing injunctions will have to interpret India's equity-based doctrine of the breach of confidence. Arbitration constitutes an effective mechanism for overcoming enforcement challenges to some extent since awards are generally enforceable under the New York Convention and can be made confidential; however, arbitration is effective only in the case of contractual disputes involving pre-arbitration agreement.

CONCLUSION

India's current framework can restrain misuse through contract and equity, but it still lacks the clarity and procedure needed for modern cross-border trade secret disputes. Firstly, India should codify trade secret protection through a dedicated statute. The main priority is a clear definition of protected information, secrecy, commercial value, and reasonable steps to maintain confidentiality. The Law Commission's 2024 report and draft bill already move in this direction, and any final law should also preserve space for reverse engineering and independent development.

Secondly, India also needs clearer guidance on jurisdiction and applicable law. At present, courts must rely on general civil procedure and private international law principles that were not designed for cross-border trade secret disputes. A new statute should include basic conflict-of-laws rules for non-contractual misappropriation and stronger confidentiality protections in litigation, such as sealed filings and restricted access to evidence. Arbitration remains useful for contractual disputes, but it cannot solve cyber-theft or third-party misappropriation where no agreement exists.

Finally, trade secret law must reflect how information is now stored and shared. AI models, cloud-hosted datasets, and source code repositories require guidance on what counts as "reasonable steps" in digital environments. India should adopt sector-specific best practices on

access control, logging, encryption, and vendor safeguards so that courts have clearer standards when evaluating protection measures.

Taken together, these reforms would move India from a system that reacts after misappropriation occurs to one that is better equipped to prevent and enforce against it. That shift is essential if India is to remain a credible and secure participant in cross-border information flows.

CHAPTER 17: ARTIFICIAL INTELLIGENCE, BIG DATA, AND EMERGING CHALLENGES IN TRADE SECRET PROTECTION

BY VAIDA JAASMITA AND SAITARUN K

INTRODUCTION

There has been a structural change in data as it has transformed and evolved from secondary to a foundational source in this contemporary digital age. Further, the rise in Artificial Intelligence (AI), Machine learning (ML) and data driven models has fundamentally altered the way the big institutions generate, compete and innovate. As many institutions or organizations are increasing this incorporation of AI into their systems to perform core activities, it raises a critical concern as to the protection of confidential business information stored within the system in this digital economical era.⁶³⁷

Traditionally, patents were the cornerstone protection for any technological innovation of any intellectual property however with the rigid requirements for patentability with the boom of AI systems leading to the disclosure obligations pushed the organisations to shift their reliance towards trade secrets.⁶³⁸ Unlike patent law, trade secrets are given protection without the need of the disclosure of the information giving an edge to be maintained as secrecy.⁶³⁹

AI ecosystems include the details of employees, intermediaries, third party vendors and several autonomous systems which creates an unprecedented grey area as it opens doors for leakage or misappropriation of these data.⁶⁴⁰ The traditional trademark frameworks were envisaged to

⁶³⁷ Stanford University, “AI Index Report 2025” available at <https://hai.stanford.edu/ai-index> (last visited on July 10, 2026).

⁶³⁸ WIPO, “Intellectual Property and Frontier Technologies: Artificial Intelligence” available at https://www.wipo.int/about-ip/en/frontier_technologies/ai_and_ip.html (last visited on July 10, 2026).

⁶³⁹ Sharon K. Sandeen. “Trade Secret Protection for Data and Databases” 41 Mitchell Hamline Law review 1057 (2015)

⁶⁴⁰ National Institute of Standards and Technology, “Artificial Intelligence Risk Management Framework (AI RMF 1.0) (2023)”; The Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39.

prevent any related human misconduct with relation to the trademark. It was not drafted and enforced in relation to AI's autonomous capability of generating information available at this unprecedented scale.⁶⁴¹

Now a major question is rising for the future of trade secrets protection in this era of AI and Big data as to whether AI generated responses possess a serious threat to the protection of trade secrets? How should these trade secret laws respond to this extraction of confidential information? And whether there are existing legal frameworks which are sufficient to protect automated increasingly complex AI ecosystems?

CONCEPTUAL UNDERSTANDING AND LEGAL BACKGROUND

A. Meaning of Trade Secrets

In a highly competitive and knowledge driven- economy, a company's valuable information is its most significant asset/MVP which brings in a lot of audience/ customers/ consumers, allowing these companies to grow and become an important player in the market. The commercially valuable information is the confidential information that provides a competitive advantage and derives value from remaining undisclosed. For instance, take companies like Coca Cola, Kentucky Fried Chicken (famously known as KFC), Google, Mysuru Paints & Varnishes etc., who have their own ingredients, elements and algorithms, which makes these companies a global player in the market. Trade secrets are unique, compared to patents, trademarks, or copyrights. Trade secrets do not require registration. A trade secret may be protected for many years. This, however, can only happen if the trade secret is kept a secret. If a trade secret is made public, it ceases to be a trade secret.⁶⁴²

One of the oldest definitions and the international foundation for protecting trade secrets is found in Article 39(2) of the Trade-Related Aspects of Intellectual Property Rights Agreement, 1994 (TRIPS)⁶⁴³ that requires all member states to safeguard undisclosed information from any kind of commercial practices. Under this provision, information qualifies as a trade secret when three

⁶⁴¹ Nicholas Carlini et al., "Extracting Training Data from Large Language Models", available at <https://arxiv.org/abs/2012.07805> (last visited on July 10, 2026).

⁶⁴² Sharon K. Sandeen & Elizabeth A. Rowe, Trade Secret Law in a Nutshell 12-16 (2nd edn., West Academic Publishing, 2017).

⁶⁴³ Agreement on Trade- Related Aspects of Intellectual Property Rights (TRIPS), 1994, art. 39(2)

essential requirements are satisfied. First, the information must be secret, meaning that it is not generally known or readily accessible to persons within the relevant industry. Secondly, it must possess independent commercial value because of its secrecy. Thirdly, the lawful holder of the information must take reasonable measures to maintain its confidentiality.

As mentioned previously, the scope of trade secrets is broad. Many people might think that trade secrets are only about secret ingredients which are added to make a particular food. But trade secrets include technical and commercial information such as formulae, manufacturing process, research data, product designs, and proprietary algorithms⁶⁴⁴. In this digital and technological driven economy, machine codes, source codes, machine-learning models, and data-processing techniques have emerged as some of the most valuable trade secret assets. Trade secrecy also protects the “negative know-how”⁶⁴⁵, which is the knowledge gained through failed experiments and unsuccessful research efforts, thereby preventing competitors from avoiding costly trial-and-error processes.

The trade secret does not offer any exclusivity in exchange for making information publicly available. It is totally based on confidentiality. Therefore, organizations also use technology and organizational means to keep their information confidential.⁶⁴⁶

B. Trade Secret Protection in India

In India, judicial interpretation plays a keen role in the evolution and development of trade secrets. As India lacks a dedicated statute governing trade secrets, it is majorly protected through a combination of contractual obligations, Non-Disclosure Agreements (NDA) and common law doctrines relating to breach of contracts. The Indian Contract Act, 1872⁶⁴⁷ serves as the primary and principal statute protecting confidential information through NDAs, employment contracts, confidentiality clauses, and other contractual agreements. Such agreements place binding legal restrictions on employees, consultants, and business partners not to reveal any proprietary information.

⁶⁴⁴ World Intellectual Property Organization, Trade Secrets: Legal Protection for Innovation (WIPO, Geneva, 2022)

⁶⁴⁵ Sharon K. Sandeen & Elizabeth A. Rowe, Trade Secret Law in a Nutshell 18 (2nd edn., West Academic Publishing, 2017)

⁶⁴⁶ David, Intellectual Property Law 472–474 (Irwin Law Inc., 2nd edn., 2011)

⁶⁴⁷ The Indian Contract Act, 1872

In addition, under the Specific Relief Act, 1963⁶⁴⁸, the courts have the power to grant injunctions, both temporary and permanent, against the breach of confidentiality of information. Equitable remedies based on the doctrine of breach of confidence have also been recognised by Indian courts, particularly where information is communicated in circumstances creating an obligation for non-disclosure.

Once technological developments started to boom in the 21st century, to the contrary, various loopholes were created and used to disclose confidential information and data. At that time, The Information Technology Act, 2000⁶⁴⁹ (famously known as IT Act) was brought into force to supplement protection by providing remedies against unauthorized access, extraction, disclosure, and misuse of electronically stored information. As businesses and companies rely upon digital platforms and cloud-based systems in the modern era, the role of IT Act⁶⁵⁰ safeguarding confidential information has become increasingly significant.

The Delhi High Court, in the case of American Express Bank Ltd. V. Priya Puri⁶⁵¹, distinguished between an employee's general skills and knowledge, which remain freely usable, and confidential business information, which remains protectable. In a similar way, Indian courts have continually identified that customer lists, price policies, and confidential business information might fall under the category of confidential information and can be protected by law.

Other than these advancements, researchers and lawmakers have often discussed the limitations of the current framework. The lacuna of not having a statutory regime creates uncertainty and ambiguity regarding definitions, remedies, enforcement standards, and protection in emerging technological contexts. The Law Commission of India and various policy discussions have therefore emphasized and proposed a bill for a separate trade secret law.

C. Artificial Intelligence and Big Data

Big data is a collection of information which is complex and large that standard computer programmes cannot store, process or analyse it. Artificial Intelligence (hereinafter referred to as

⁶⁴⁸ The Specific Relief Act, 1963.

⁶⁴⁹ The Information Technology, 2000.

⁶⁵⁰ The Information Technology Act, 2000

⁶⁵¹ American Express Bank Ltd. v. Priya Puri, 2006 SCC OnLine Del 368

AI) has become very significant in everyone's life where people use it for research, cooking guidance, as study material, for generating algorithms, for designing and it keeps on going. AI has evolved from rule-based systems to sophisticated technologies capable of autonomous adaption and content generation. Machine Learning is a central component of AI which allows and enables systems to learn patterns from the given and existing data and improve performance without explicit performing. More recently, original texts, images, audios, software code and other forms of content based on patterns learned from vast training datasets.

The effectiveness of AI systems depends heavily upon Big Data. Big Data which can be understood through the framework of the "5 Vs".⁶⁵²

1. Volume – the enormous quantity of data generated and stored.
2. Velocity – the speed at which data is collected, processed and analysed.
3. Variety – the diversity of data formats, including structured and unstructured data.
4. Veracity – the reliability, accuracy, and authenticity of data.
5. Value – the economic and strategic benefits derived from data analysis.

Big Data and AI are strongly and intrinsically dependent upon confidential information. Businesses which have training datasets, proprietary algorithms, source code, model architectures, customer information, research data, and model parameters often constitute highly valuable commercial assets. The competitive advantage of many AI enterprises derives not merely from the final product but from the unique datasets and computational methodologies used in its development.

When data is available, the risk of unauthorized disclosure, reverse engineering, data leakage, and inadvertent loss of confidentiality will take place. But unlike patents which might be unavailable for certain algorithms or copyright protection which may not extend to underlying ideas or functional processes, trade secrets will be a safeguard in this AI ecosystem. These developments have created new legal challenges at the intersection of AI, Big Data, and trade secret protection, necessitating a reassessment of traditional confidentiality frameworks in the digital age.

⁶⁵² Ana Nordberg, "Trade Secrets, Big Data and Artificial Intelligence Innovation: A Legal Oxymoron?" in Jens Schovsbo, Timo Minssen & Thomas Riis (eds.), *The Harmonization and Protection of Trade Secrets in the EU: An Appraisal of the EU Directive* (Edward Elgar Publishing, 2020).

AI AND TRADE SECRETS: EMERGING LEGAL ISSUES

AI and Big Data have become more important as companies have moved from traditional reliance on physical means for being success by shifting towards AI base models, algorithms, training data and business intelligence which are available in digital form itself as these provide a competitive edge wherein rather than applying for patent which makes it public companies prefer to protect these as trade secrets.⁶⁵³

However, this shift raises many difficulties as traditionally trade secrets were not designed to handle ownership, misappropriation, employee mobility, reverse engineering and cross border issues. Therefore, this pushes towards reinterpretation and adaption of AI in trade secrets laws.⁶⁵⁴

A. AI Algorithms as Trade Secrets

AI systems are self-generating and they depend on algorithms which are set of instructions or codes which teach AI as in how to work or process the given information; model architectures which is a structure or design of an AI model; and training methodologies which are the methods which are used to train the AI system by given data.⁶⁵⁵ These factors determine how accurate, efficient a system will be.

Questions can be raised as to why not patent them? Traditionally companies protected their inventions through patents but since this gave exclusive rights for a limited period of time 20 years later disclosing it to the public. For companies who are based on AI models there would be a big threat of competition by development of similar technologies so therefore, companies choose to protect themselves through trade secret laws which allows them keep their valuable and confidential information intact.⁶⁵⁶

What makes trade secrets attractive when it comes to AI? Trade Secrets becomes more attractive as there is no disclosure to the public, it gets an indefinite period of protection, there is no copying mechanism unless one knows how it works and the company has sole ownership over

⁶⁵³ Agreement on Trade Related Aspects of Intellectual Property Rights, 1994, art. 39.

⁶⁵⁴ Christopher B. Seaman, "Trade Secrets and Machine Learning" 110 Iowa Law Review (2024).

⁶⁵⁵ Christopher B. Seaman, "Trade Secrets and Machine Learning" 110 Iowa Law Review (2024).

⁶⁵⁶ The Defend Trade Secrets Act, 2016, 18 U.S.C. §§1836-1839

such confidentiality.⁶⁵⁷ Furthermore, AI technology changes itself rapidly and companies too change and modify their models and algorithms signify longer term protection and advantage over patent law.

Such as Google's search engine's algorithm uses a certain formula which has not been disclosed. If disclosed then competitors can copy and website owners can manipulate the results easily therefore google relies on trade secret protection.⁶⁵⁸ Open AI publishes research and technical reports but it does not disclose every detail of data sets, procedures, systems etc as these elements are competitive advantage and function as trade secrets. And companies like Netflix, Amazon and Spotify use recommendation algorithms that suggest based user-behaviour data which are protected through trade secrets rather than public disclosure.⁶⁵⁹

In the case of Waymo v. Uber (2017) signifies the importance of AI-related trade secret wherein a senior manager of Waymo downloaded confidential files relating to LiDAR technology and later joined Uber and became involved in Uber's autonomous vehicle project and Waymo alleged Uber's benefit from Waymo's confidential technology. Later Waymo was compensated by Uber. This case demonstrates how trade secrets has become one of the primary laws for protecting AI innovations.⁶⁶⁰

B. Big Data as a Trade Secret Asset

Even the best AI model cannot perform without large amounts of data. For example, Netflix needs viewers viewing history to recommend movies; Amazon needs the customer's purchase history for suggesting products; and ChatGPT-type models need large amounts of text data. Therefore, data is the most valuable asset for business.⁶⁶¹

Why can data be a trade secret? Companies often spend huge amounts and effort to collect data, clean errors, organize information, label, update and maintain datasets. Because of this

⁶⁵⁷ David S. Levine and Christopher B. Seaman, "The DTSA at One Year: An Empirical Study of the First Year of Litigation Under the Defend Trade Secrets Act" 53 Wake Forest Law Review 105(2018).

⁶⁵⁸ Google LLC, How Search Works, available at <https://www.google.com/search/howsearchworks/> (last visited on July 12, 2026).

⁶⁵⁹ Sharon K. Sandeen and Elizabeth A. Rowe, Trade Secret Law: Cases and Materials (West Academic Publishing, 3rd edn., 2022).

⁶⁶⁰ Waymo LLC v. Uber Technologies Inc., No. 3:17 -cv-00939 (N.D. Cal. 2017).

⁶⁶¹ Viktor Mayer- Schönberger and Kenneth Cukier, Big Data: A Revolution That Will Transform How We Live, Work and Think (John Murray, London, 2013).

investment, companies claim that their datasets are protected under trade secret laws.⁶⁶² For example, a company may have 20 million customer records, years of consumer behaviour data, purchasing patterns and market trends which a competitor could get advantage without any investment if information obtained.

Can such data be a trade secret?⁶⁶³ This is where the main legal issue arises as Trade secret law protects that information which has economic value because it is not known and has been kept secret through reasonable measures. Can data meet these needs? Raw data, such as names, job titles or anything which is visible to all through a website does not qualify to be trade secrets as it has been already known but Curated Data, wherein a company spends years to collect, verify, organize, analyse and build models based on such data which becomes more valuable than a public facts then such refined compilation may be a trade secret.

In the case of *HiQ Lab v. LinkedIn*⁶⁶⁴, where HiQ was collecting data from public LinkedIn profiles and wherein LinkedIn stopped HiQ from accessing data. But the issue being the data was available publicly on LinkedIn. So, the question raises whether someone can claim over publicly available data? This case highlighted two views – first being if any information is available then can anyone collect it? second being if a company invests resources to gather, organize, maintain and monetize should it have some protection over its competitors. This case therefore raises a larger question who owns/controls data in this digital economy.⁶⁶⁵

When it comes to AI, modern AI systems need enormous raw data and companies through its resources convert it into curated data which becomes more valuable than raw information itself. Courts often face challenges whether curated data from raw data by spending money and creating datasets whether such should receive protection under trade secret laws?

C. Employee Mobility

Companies often compete to hire the best AI engineers, researchers and data scientists as AI has become more important and such competition is known as the “AI Talent War”.⁶⁶⁶ The problem is that when employees move from one company to another where they possess the confidential

⁶⁶² Sharon K. Sandeen, *Trade Secret Law* (Edward Elgar Publishing, 2017).

⁶⁶³ Agreement on Trade-Related Aspects of Intellectual Property Rights, 1994, art. 39

⁶⁶⁴ *hiQ Labs Inc. v. LinkedIn Corp.*, 31 F.4th 1180 (9th Cir. 2022).

⁶⁶⁵ Pamela Samuelson, “Privacy as Intellectual Property?” 52 *Stanford Law Review* 1125 (2000).

⁶⁶⁶ Orly Lobel, *Talent Wants to Be Free* (Yale University Press, New Haven, 2013).

knowledge of the company there might be high chances of such being disclosed even if not intentionally.

In the case of *PepsiCo v. Redmond* (1995), the employee left PepsiCo to join the competitor. The court developed the “Inevitable Disclosure Doctrine” which meant that if an employee's new role is that similar to his previous role and disclosure of confidential information becomes unavoidable then the court may restrict the employee from joining the competitor.⁶⁶⁷

In the case of *IBM v. Papermaster* (2008), IBM tried to stop the senior executive from joining Apple as he possessed confidential technology of IBM to which court agreed as there is significant threat from disclosure of trade secrets.⁶⁶⁸

The companies compete intensely for AI talents and intensively use NDAs, confidentiality clauses, non-compete agreements and trade secret litigation to protect their valuable information as these AI experts often have deep knowledge of algorithms, techniques and datasets which raises issues in the AI industry.⁶⁶⁹

D. AI-Assisted Trade Secret Misappropriation

Generative AI tools not only make work easy by quick copy-analysis, but also raises new risks for the companies therefore it becomes a tool for stealing and exposing trade secrets.⁶⁷⁰ For instance, certain times the employees share their data or records into public AI platforms like ChatGPT or others and once these are uploaded, the companies lose control over its usage and storage. For example, in one of the cases employees at Samsung uploaded certain confidential source code to ChatGPT, which caused the trade secret leakage.⁶⁷¹

Employees tend to use AI for faster extraction and organisation of data and employees who have confidential information tend to do this so that 2 weeks work can be reduced to 2 minutes making it easy for AI to copy or transfer valuable business transformation. Furthermore, raising another concern that AI models may unintentionally generate code similar to company's secret code which might reveal confidential information via responses. This raises a bigger legal

⁶⁶⁷ *PepsiCo Inc. v. Redmond*, 54 F.3d 1262 (7th Cir. 1995).

⁶⁶⁸ *International Business Machines Corp. v. Papermaster*, No. 08-CV-0978 (S.D.N.Y. 20008).

⁶⁶⁹ Sharon K. Sandeen and Elizabeth A. Rowe, *Trade Secret Law: Cases and Materials* (West Academic Publishing, 3rd edn., 2022).

⁶⁷⁰ National Institute of Standards and Technology, *Artificial Intelligence Risk Management Framework 1.0* (2023).

⁶⁷¹ Samsung Electronics Co., *Internal Generative AI Usage Incident* (2023).

question as to who is responsible for such generation or disclosure of information as traditionally, trade secrets were protected from human intervention or misappropriation and weren't created to deal with AI misappropriation therefore courts are analysing as to how trade secret laws should be applicable to generative AI.⁶⁷²

E. Reverse Engineering through AI

Reverse engineering means studying how a product works. Traditionally, trade secret law allowed competitors to learn about any product through observations, tests and analysis as long as there was no obtaining confidential information illegally.⁶⁷³ As advance AI systems can analyse outputs, identify hidden patterns, learn and recreate a work make reverse engineering of through AI more powerful.⁶⁷⁴

For instance, suppose company A has a secret recommendation algorithm, now company B uses AI to analyse thousands of recommendations produced by Company A's system and develops a very similar algorithm without ever accessing the original code. Similarly, by repeated interaction with an AI model, another AI system might learn enough about its behaviour to create a similar model without ever seeing the original source code.

The legal issue arises as to whether Company B has lawfully reverse-engineered the system or has copied Company A's trade secret. So, if AI learns a company's secret process only by observing publicly available outputs, is that lawful reverse-engineering or trade secret theft? Wherein this is where trade secrets law fails to provide a clear answer as traditionally there needs a significant human effort and expertise for reverse engineering.⁶⁷⁵

F. Cloud Computing and Cross Border Data Transfers

Nowadays, most of the companies save and process their data in cloud computing rather than keeping it in their owned servers and AI systems specifically depend on cloud services as they need large amounts of storage and computing power.⁶⁷⁶ Now, the problem being that cloud data

⁶⁷² Mark A. Lemley and Bryan Casey, "Fair Learning" 99 Texas Law Review 743 (2021).

⁶⁷³ Restatement (Third) of Unfair Competition §43 (1995).

⁶⁷⁴ Florian Tramèr et al., "Stealing Machine Learning Models via Prediction APIs" 25th USENIX Security Symposium (2016).

⁶⁷⁵ Mark A. Lemley, "The Surprising Virtues of Treating Trade Secrets as IP Rights" 61 Stanford Law Review 311 (2008)

⁶⁷⁶ World Intellectual Property Organization, Trade Secrets: Policy Framework and Best Practices (WIPO, Geneva, 2022)

is often stored in multiple countries at the same time creating a legal challenge for protecting trade secrets. A company's confidential information may be stored or processed in different countries.⁶⁷⁷ However, each country has its own laws regarding trade secret protection. If confidential information is stolen or leaked, it may be difficult to determine – Which country law applies and jurisdiction of court to hear the dispute.

Some countries require certain types of data to remain within their borders. This is known as data localization.⁶⁷⁸ For example, Country A may require sensitive data to be stored locally. Country B may allow free transfer of data across borders. Companies operating globally must comply with different and sometimes conflicting legal requirements.

Trade secret protection often depends on quick legal action to stop disclosure but if information is stored in several countries, handled by multiple cloud providers and accessed by people in different jurisdictions it becomes harder to identify who is responsible to obtain devices and enforce court orders.

For example, an Indian AI company stores its training data on cloud servers located in India, Singapore and the USA. If trade secrets are leaked from servers in another country, a question arises with respect to which country's laws apply, where the case should be filed and how the company can enforce its rights internationally. Furthermore, AI systems are usually trained and operated using global cloud infrastructure. As a result, protecting AI related trade secrets is no longer a domestic but an international issue.⁶⁷⁹

CONTEMPORARY DEVELOPMENT AND GLOBAL PERSPECTIVE

The rampant expansion of AI and Big Data have increased significant developments in trade secret protection across major jurisdictions. Due to Big Data which consist of proprietary datasets, machine-learning models, and algorithms which increasingly constitute valuable

⁶⁷⁷ Agreement on Trade- Related Aspects of Intellectual Property Rights (TRIPS), 1994, art. 39.

⁶⁷⁸ Digital Personal Data Protection Act, 2023 (Act 22 of 2023).

⁶⁷⁹ National Institute of Standards and Technology, Artificial Intelligence Risk Management Framework 1.0 (2023).

business assets, governments have begun adapting their legal frameworks to address the challenges posed by digital innovation.

It is also important to understand the global perspective of how trade secrets protection is being followed and regulated through legal frameworks.

A. United States (USA)

The United States strengthened trade secret protection through the enactment of the Defend Trade Secret Act, 2016 (hereinafter referred to as DTSA)⁶⁸⁰. Before the enactment of this Act, trade secret was governed by the state laws based on the Uniform Trade Secrets Act (UTSA)⁶⁸¹. The DTSA⁶⁸² introduced a federal civil cause of action for trade secret misappropriation, which would automatically make unlawful disclosure of trade secrets against law thereby ensuring greater consistency in enforcement across states.

One of the major features of the DTSA is that of ex parte civil seizure wherein the courts may issue orders to seize any property required to prevent the disclosure of trade secrets. Other remedies provided in this law include injunctions, compensatory damage, unjust enrichment, and exemplary damage in instances of malicious misappropriation. With regards to the present times when AI dominates, this becomes relevant because confidential algorithms and data can be quickly reproduced and transmitted.

B. European Union (EU)

The EU (Directive (EU) 2016/943) is adopted to provide harmonised trade secrets legislation for member states. The Directive defines trade secrets and establishes a uniform standard for their acquisition, use and disclosure. An important aspect of this is the non-exposure of confidential information even during judicial proceedings, which ensures that litigation itself does not result in the exposure or disclosure of proprietary information.

This Directive also has certain exceptions which consist of whistleblowing, freedom of expression, and the protection of public interests. Recent initiatives such as the EU Data Act further reflect the growing importance of data governance and the protection of commercially valuable industrial data within the digital economy.

⁶⁸⁰ Defend Trade Secret Act, 2016, Pub. L. No. 114-153, 130 Stat. 376 (2016).

⁶⁸¹ Uniform Trade Secrets Act (1985), with 1985 Amendments.

⁶⁸² Uniform Trade Secrets Act

C. China

Considering China's rapid technological developments and data driven industries, it has emerged as a major jurisdiction in trade secret litigation. Trade secret protection is governed by the Anti Unfair Competition Law (AUCL), which has undergone substantial reforms to strengthen remedies and align with international standards. Courts in China increasingly recognise the economic value of datasets, customer information, and AI- related business intelligence as protectable trade secrets. Additionally, several provinces have introduced data intellectual property registration mechanisms that allow enterprises to register datasets and digital assets, thereby facilitating proof of ownership and enforcement in legal proceedings.

D. India

Presently, India lacks a statute which governs and protects trade secrets. But as already mentioned, India has statutes like the Indian Contract Act, 1872, the Specific Relief Act, 1963 where parties become bound to contractual obligations via non-disclosure clauses and NDAs. But during March 2024, the 22nd Law Commission of India released its 289th report on "Trade Secrets and Economic Espionage". It proposed a dedicated bill for trade secret protection via the Protection of Trade Secret Bill to establish a unified, sui generis legal framework for protecting proprietary business information, ie, the confidential information and preventing its unauthorised disclosure.

The enactment of the Digital Personal Data Protection Act, 2023 (famously known as DPDP Act) is an important aspect for India in regulating personal data. However, it does not apply to proprietary algorithms, AI models, or confidential datasets. Scholars and policymakers consequently have supported and advocated for a separate legislation for trade secrets.

One of such proposals is the Proposed Legislation of the 22nd Law Commission that tries to bring India's intellectual property regime in conformity with international practices and TRIPS agreement. The Draft Protection of Trade Secrets Bill specifies what constitutes protected trade secrets and what are the rights. Criteria of a trade secret is that it gets commercial value because of being kept confidential, is not available to everyone else, and is kept confidential by the owner

through reasonable measures and exemptions of the law will not apply to standard professional knowledge of the employee and any other information related to violation of any law.

This draft bill is mainly concerned with civil penalties (such as injunction and damages). It has been claimed that this bill does not contain the necessary teeth of criminal enforcement methods and therefore does not act as an effective deterrent against corporate espionage. This draft bill also provides for forced disclosures of a trade secret for “public interest” or government use. Trade organizations believe that such a provision is overly broad and could jeopardize their proprietary technology.

CHALLENGES AND SUGGESTIONS

A. Challenges

Legal Challenges

One important issue in India is the lack of a legal regime addressing the question of trade secrets. Unlike America and the EU, in India, there is no statutory regime to safeguard such intellectual property. The laws of the country only provide for protection of trade secrets through contractual obligations, common law, and equitable principles. It poses several problems in cases involving data and algorithms generated by AI systems. One such problem is the complexity associated with proving misappropriation due to the black box nature of AI systems. As developers themselves might be incapable of explaining the functioning of the model for a certain input, making out the misappropriation of confidential information would become difficult.

Technological Challenges

The fast growth in technology innovation has led to new means of trade secret misappropriation. LLMs may end up memorizing and reproducing proprietary information in their training data using prompts that reveal business information. Additionally, data scraping has allowed rivals to gather large volumes of business information on digital platforms and use it to create their own AI systems. The third type of emerging threat in the context of trade secrets is model extraction

or distillation attacks, where attackers use systematic queries of proprietary AI to emulate its behavior despite not having access to its source code and training data.

Enforcement Challenges

Protecting trade secrets has become very challenging due to the borderless nature of the digital economy. Cloud computing and distributed data storage makes proprietary information reside in several jurisdictions, hence causing legal uncertainty. Moreover, anonymous cyberattacks and electronic espionage make it even more difficult to enforce trade secret laws due to unknown perpetrators.

B. Suggestion

This entails adopting several strategies which include legal reforms, technology safeguards and international cooperation. For starters, there should be a dedicated law on trade secret protection which would define trade secrets, standardize methods of protection, provide both civil and criminal remedies and address ownership questions on confidential information generated using AI. Secondly, governments need to implement AI governance systems including compulsory confidentiality standards and secure regulatory oversight to ensure proper use of AI without compromising proprietary information.

In the organisational setting, companies need to improve their compliance procedures through non-disclosure agreements, regular awareness training for employees and role-based access control (RBAC). This will be further reinforced through technology by using encryption, differential privacy, data minimization, model watermarking, API rate-limiting and AI-powered access pattern detection systems that can detect suspicious access to confidential information before any leakage occurs.

In addition, since artificial intelligence itself has global implications, better international cooperation becomes vital. Standardization of the trade secrets laws, as well as the development of cross-border enforcement procedures and improved judicial cooperation through organizations such as WIPO, will assist in proper investigation and settlement of international disputes on trade secrets.

CONCLUSION

AI and Big Data have evolved the way businesses use, create and protect their confidential information such as the datasets, algorithms, source codes and strategies etc. are often protected under trade secret protection than that of patent laws as they provide more competitive advantages.⁶⁸³ However, technologies such as data scrapping, ML, cloud storage and cross-border data sharing have made it difficult to keep secure information.⁶⁸⁴

Even though countries such as USA and EU have dedicated trade secret laws⁶⁸⁵ India still follows the general principles and contract laws which are not sufficient to deal with the transcending AI and digital economy.⁶⁸⁶ Therefore, India should incline towards introducing a separate law on trade secrets with specific safeguards, stronger cybersecurity measures, and better enforcement mechanisms. Protecting the valuable information while encouraging the innovations will help the companies to grow their businesses in a safe and secure manner.⁶⁸⁷

⁶⁸³ Agreement on Trade Related Aspects of Intellectual Property Rights, 1994, art. 39; David S. Almeling, “Seven Reasons Why Trade Secrets Are Increasingly Important” 27 Berkeley Technology Law Journal 1091 (2012).

⁶⁸⁴ OECD Artificial Intelligence, Machine Learning and Data Governance Report, “Artificial Intelligence, Machine Learning and Data Governance” (OECD, 2019); World Intellectual Property Organization, “WIPO Technology Trends 2-25: The Future of AI” (2025).

⁶⁸⁵ Defend Trade Secrets Act; Directive (EU) 2016/943.

⁶⁸⁶ The Indian Contract Act, 1872 (Act 9 of 1972), ss. 27, 73; American Express Bank Ltd v. Priya Puri, 2006 SCC OnLine Del 638.

⁶⁸⁷ World Intellectual Property Organization, “WIPO Technology Trends 2025: The Future of AI” (2025).

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