LEX LOCALIS-JOURNAL OF LOCAL SELF-GOVERNMENT
ISSN: 1581-5374 E-ISSN: 1855-363X
VOL. 23, NO. S5(2025)

AN IMPACT OF TRADEMARKS AND GI ON AGRICULTURAL TRANSFORMATION AND FOOD SECURITY

GOWRI MANOGARI S.[1*] AND DR. MARIMUTHU U.[2]

[1]Research Scholar, Saveetha School of Law, Saveetha Institute of Medical and Technical Science (SIMATS), Saveetha University, Chennai 600077.
ORCID ID: 0009-0009-7035-6022
[2]Assistant Professor, Saveetha School of Law, Saveetha Institute of Medical and Technical Science (SIMATS), Saveetha University, Chennai 600077.

gowrimanogaris.ssl@saveetha.com[1]
marimuthuu.ssl@saveetha.com[2]

*Corresponding author: Gowri Manogari S., E-mail: gowrimanogaris.ssl@saveetha.com

ABSTRACT
The developing nations economy, livelihood and food security are based on the agricultural sector of the country. Even though agriculture is considered as a major sector, the producers, smallholder farmers very much struggle to differentiate their products in competitive markets, achieve equitable access to value chains, and safeguard traditional knowledge and practices. This research helps to understand trademarks, geographical indications (GIs) and its effect on agricultural transformation and food security. Trademarks are a legal instrument to help the farmers to safeguard the traditional farming practice, distinguish their products from others and also improve the socio- economic status of the people. The aim of the paper is to examine the impact of trademarks in agricultural growth and better food security. It also helps assessing the function of trademarks in competitive markets, inducing sustainable agriculture, and overcoming legal and institutional issues. The research also discusses case studies like Basmati rice, Darjeeling tea in order to demonstrate real life experience. This article shows the future prospects of trademarks with digital technologies for transparency, enhancing supply chain, and enhancing consumer trust. It also offers policy suggestions for the process of registration, raising awareness, and extending legal support to farmers and cooperatives. The trademarks are influential tools for promoting agricultural innovation, rural economy support, and long-term food security. The proper use of trademark can result in inclusive growth, food system resilience, and the conservation of agri-biodiversity and cultural heritage. This, however, needs strong institutional, legal changes and stakeholder awareness.

Keywords: Trademarks, Agricultural Transformation, Food Security, Geographical Indications, Traditional Knowledge

1. INTRODUCTION

Agriculture is the important backbone for the economies, livelihoods, and food security of many developing countries (FAO, 2020).But, the farmers are often facing the challenges in accessing the competitive markets and protecting their traditional way of agricultural practice. The global food markets are limited in recognition of traditional agricultural products. In order to address this challenge the Trademark and GI have emerged as essential tools. It also helps the farmers to differentiate their products, preserve traditional knowledge, access the markets, enhancing their status and agricultural transformation (WIPO, 2021).

This study is about addressing the problem faced by the farmers even though they are provided with Intellectual property tools like Trademark and GI, because of lack of awareness in applying the tools by small farmers, they are also affected in global markets before the large scale producers. The aim of the study is to examine the role of Trademark in agricultural growth, food security, sustainable agricultural practice and overcoming legal and institutional barriers.

The significance of the study highlights the role of trademark and GI in developing the food security, potential to inform policy and practice in the agricultural sector for the socio-

economic growth of small farmers of developing countries. It also provides valuable insight, how intellectual property helps in agricultural innovation and conservation of agri-biodiversity. The research also contributes to understanding how digital technology can enhance the transparency, traceability by trademark, thereby increasing consumer trust and supporting sustainable agricultural practice.

2. CONCEPTUAL FRAMEWORK OF TRADEMARKS AND GEOGRAPHICAL INDICATIONS:

The Intellectual property rights (IPR) plays a major role in agricultural development, especially in the global south. Among them Trademark and GI is most relevant for small farmers and rural producers to gain recognition, value and support in competitive markets. This section gives an overview of trademark and GI with their definition, difference and the implications for legal and economic development.

2.1 Trademarks and Geographical Indications

A trademark is a sign (words, logos, symbols, sounds, colours) capable of distinguishing the goods or services from one product from those of others (WIPO, 2021). In the agricultural perspective, trademarks can help farmers to create brand identity for local or organic products in order to differentiate their product in the competitive market. So, that it will build reputation, assurance, and loyalty among the customer.

Geographical indications (GIs) are used to designate products that originate from a specific geographic location and possess qualities, reputation, or characteristics essentially attributable to that origin (EUIPO, 2020). GIs are collective rights held by associations or cooperatives. Examples are “Darjeeling Tea” from India or “Parmigiano Reggiano” from Italy, giving unique environmental and cultural context to the product's distinctiveness.

Even though both trademark and GI are used for branding, their legal basis and social function are different. Trademarks emphasize “individual commercial identity”, whereas GIs deals with “collective heritage and regional identity” (Addor & Grazioli, 2002). These distinctions are crucial in determining how IP can be leveraged to support inclusive rural development and value chain participation.

2.2 Legal Protection and Economic Implications of Trademark and GI

The Trademark and GI give legal support to protect agricultural products from fraud, misappropriation and unfair competition in the market. For example, unauthorised use of registered GI can be challenged in court based on National and International framework like TRIPS Agreement (WTO, 1995). This protection safeguards the small farmer group from large corporations in commodification of traditional products without benefit- sharing.

An economic perspective, both trademarks and GIs can contribute to price, enhanced market access, and improved bargaining power for producers (Bramley, Biénabe, & Kirsten, 2009). The studies indicate that certified GI products get more prices in both domestic and export markets, as they are provided to offer better quality, authenticity, and sustainability (Barham, 2003). Similarly, agricultural products with strong trademarks can enter into the market by fair trade, organic products will help the farmers in expanding market opportunities for smallholders.

Apart from this, IP rights also play a vital role in safeguarding the cultural identity, biodiversity of the country by achieving sustainable development, conservation and transmission of indigenous knowledge across generations (Belletti et al., 2015).But the implementation and enforcement of trademarks and GIs requires strong institutional support, awareness among producers, and access to legal and administrative resources. Without these, the benefits of IP

protection can favor larger producers, further marginalizing small farmers in developing countries.

3. IMPACT OF TRADEMARK AND GI ON AGRICULTURAL TRANSFORMATION

Trademark and GI not only protects the IP but also acts as a powerful tool for driving agricultural transformation. By providing product differentiation, value addition and access to the market and enhancing the livelihood of small farmers and promoting sustainable development. This section explains how both of them contribute to agricultural transformation.

3.1 Empowering Small Farmers as producers

The farmers of the developing countries often face problems competing with large- scale agricultural producers. The legal recognition and protection given by IP helps the farmers with their ownership and control the identity of the products. This branding provided them with asset quality, origin, authenticity, and distinguished their products in the global market (Bramley, Biénabe, & Kirsten, 2009).

The GI tag and Trademark not only help to maintain the quality of the products, it also helps to generate the income because of the uniqueness of the product. For example, the GI status of "Blue Mountain Coffee" in Jamaica gives increased income opportunities for small farmers in cultivation (Giovannucci et al., 2009).

However, in order to empower IP protection requires legal literacy, capacity and access to registration procedures that are often lacking in rural environments.

3.2 Enhancing Value Chains and Market Access in agriculture

Both IP tools enable the producers with high market value through brand and consumer recognition. When they know how to manage the tools properly, the producer will get a greater share of the value in the supply chain, beyond raw commodity to processed and certified goods (Bowen & Zapata, 2009).

This transformation provides significant support to agro- exporters. The value chain of Colombian coffee has a collective trademark, allowing them to negotiate for better prices and they are directly connected to the international buyers (Teuber, 2010).

3.3 Role in Rural Development

The trademark and GI not only support the producers, it has a broader impact on the socio-economic status of the rural communities. When the IP tools are properly governed it can lead to increased investment, improve infrastructure and develop services like agro- tourism, packaging etc.., apart from this the social capital generated through collective organisation are increased by GI tags and collective trademark eg. Darjeeling Tea (Das, 2010). Over a period of time it will also create some employment opportunities for rural people.

4. CASE STUDIES

This section is about how trademark and GI works in practice, especially in the field of agricultural transformation and food security in India. It also deals with opportunities and challenges associated with registered GI. For example Basmati rice and Darjeeling tea.

4.1 Basmati Rice

Basmati rice is cultivated in the Indo- Gangetic plains of India and Pakistan is famous for its distinct aroma, long grains and unique taste. The cultivation is a century old practice based on agro- climatic conditions. "Basmati" as a GI tag from 216 by India. This saves the legacy of the native cultivators. Which also provides them international recognition. India opposes the trademark application filed by the United States for "Texmati" and Pakistan for GI registration in the European Union. This highlights the "complexity of trans boundary GI enforcement" (Menapace & Moschini, 2011).

The GI tag for Basmati rice helps the Indian farmers to export their product at a premium price and reduce the risk of counterfeit goods in the international market. The protection also provides "higher incomes and better bargaining power" especially aligned with fair trade certification (Jena & Grote, 2010).

In Spite of all this benefit, the small scale farm producers lack in getting GI benefits due to limited awareness, high certificate cost, lack of registration procedure. These issues can be addressed by providing a policy mechanism that makes the rural farmers aware about GI based value.

4.2 Darjeeling Tea

Darjeeling tea is the first product to receive GI tag in 2004, cultivated in West Bengal, India. It is also called "champagne of tea" for its delicate flavour. The Tea Board of India manages this GI for certification and licensing to ensure authenticity of the Darjeeling tea from counterfeit in the global market (Das, 2010).

The benefits of GI registration:

- Provide international brand recognition
- Increased export revenues
- Support for traditional farming systems
- Enchanted sustainability and food security

After these benefits also the small producers are facing barriers in certified supply chains. Another drawback is the benefits are to be distributed among stakeholders including plantation workers, owners of estate and small growers here again it remains uneven. Apart from this the fluctuations in global demand & climate change raises a threat to long term viability of Darjeeling tea (Ponte & Gibbon, 2005). In order to overcome these challenges the GI tag needs integrated management strategies along with legal protection, it also include social equity, sustainability standards and capacity building.

5. CHALLENGES AND BARRIERS IN IMPLEMENTATION

The trademark and GI promise to empower small farmers and enhance agricultural value for legal, economics and technical barriers with equitable and effective implementation. The IP tools, without addressing these challenges, remain limited for the majority of producers in developing countries.

5.1 Lack of Awareness among Producers

One of the major challenges among farmers is lack of awareness about the function, existence and benefits of trademark and GI. Rural areas where small farmers may not recognition, how to protect their products in the global market using this tool. Some of them who have awareness also may not be well equipped in handling technical and legal knowledge about registration, certification requirements or enforcement of their rights (Rangnekar, 2004).

5.2 Legal and Institutional Weaknesses

Many developing countries still face a weak institutional framework for enforcing IP rights. This includes:

- Less number of IP office to process and monitor application
- Lack of legal infrastructure to file cases against infringement and counterfeiting, especially cross border issues (Josling, 2006).
- The coordination between IP authorities and agricultural ministries are poor.
- The absence of a mechanism for managing GI and trademark rights also results in conflicts between producers and reduces the trust.

5.3 Market Access and Technological challenge

The dynamic nature of the market often supports the large producers and also corporate interests dominate the supply chain, limiting the benefits available to small producers because

the larger producer can leverage brand positioning, economic scale and exports capability. The GI premium in some cases supports processors or exporters other than farmers. The non-tariff barriers also provide strict quality standards, food safety regulation and traceability demand in markets, and serve as barriers for small farmers unless they are provided by institutional and financial support (Sylvander et al., 2006).

To effectively use trademark and GI there is an increasing need of digital tools for product tracking, certification and marketing. However most of the rural areas have limited Internet connectivity, data infrastructure and low digital literacy increase the risk of small farmers in participation in the online market, digital verification system, and block chain traceability. Without addressing these structural barriers again the benefits of GI and trademark protection are exclusive to the agricultural sector.

6. FUTURE PROSPECTS AND DIGITAL TECHNOLOGY

The system of agriculture changes in response to climate change, globalisation and consumer preference. The integration of IP tools gives transformative opportunity, this technology also helps to address the long- standing issues like traceability, transparency, trust and empowering producers to adapt complex value chain and digital markets.

6.1 Enhancing Transparency and Traceability

Nowadays the consumers are increasingly demanding transparency of the product based on their origin, production process and environmental impact. This paves way for digital technologies like QR code, block chain, geographical information system and mobile apps helps in tracing the GI and trademark products. The block chain system helps the stakeholders to verify the product's authenticity (Rana & Mishra, 2022). Block chain systems reduce the counterfeit of products and also strengthens consumer confidence.

The example for tech enabled GI management in India is the Tea boards QR code system for Darjeeling tea and Traceability software for Basmati rice. These technologies also support certification procedures, support real time monitoring and compliance costs for regulators and producers.

6.2 Promoting Market Access and Consumer Engagement through digital technology

The digital platforms like e-commerce, social media marketing and online branding supports the small farmers (trademark and GI) holders can directly engage with consumers both national and international level without depending on intermediaries. Example the producer can directly use interactive digital storytelling technique by video based documentation to the unique characteristics of their products.

The remote sensing and climate forecasting integrated with the GI system support sustainability certification and adaptive agricultural practice. This also prevents the climate related risks that threaten the consistency of product quality and availability (Belletti et al., 2015).

6.3 The Road Ahead: Digital- IP tools integration

The Government should concentrate on rural digital infrastructure and capacity building among small farmers. The IP framework must be amended to adapt digital certification, e- labelling, online dispute resolution etc., The public- private partnership has to be promoted in ensuring the technology reaches the marginalised groups. The digitalisation also plays a vital role in reshaping agriculture, the combination of IP rights with technology offers unique opportunities (extransparent food system) to the farmers.

7. POLICY RECOMMENDATIONS FOR SUSTAINABLE AGRICULTURAL TRANSFORMATION

The benefits of trademark and GI as to reach the farmer and rural communities means there is a need for some policy framework.

To ensure that the benefits of trademarks and geographical indications (GIs) are equitably realized by smallholder farmers and rural communities, a coherent and inclusive policy framework is essential. Policymakers must address structural barriers while fostering innovation, legal empowerment, and digital integration to support sustainable agricultural transformation.

7.1 Streamline Trademark and GI Registration Processes

The registration process is time consuming and costly, most of the time small farmers could access this IP protection. Government should establish service centres in rural areas to provide support by farmer- friendly application procedure, reducing administrative cost that help the producers to apply in groups. This also ensure that traditional knowledge and regional specialties can be legally protected the individual farmers.

The government in collaboration with NGO and academic institutions generate awareness program like training program, community workshops, and capacity building initiatives to farmers in rural areas. These programs must include:

- The benefits of IP rights
- Practical guidance of procedure
- Provide support for developing brands, labelling and quality standards.

7.2 Create Legal Support and Cooperatives to Help Farmers Assert IP Rights

The access to legal expertise remains a barrier in farmers of ruler areas. So, they can't properly defend their IP rights. The Government and civil society should promote the establishment of legal aid cells, community based services to the small producers for trademark and GI protection. This help them to navigate the disputes across the global, to fight against infringement, benefits sharing among producer, increases the bargaining power and safeguard their interest.

7.3 Digital Tools to Strengthen Supply Chain Monitoring and Certification Systems

Digital technology offers solutions to IP implementation challenges and policy framework should promote investment in QR code labelling, block chain traceability, mobile certification app and GIS to regulate transparency in supply chain, strengthen consumers trust and enable real time monitoring of production standards. The combination of digital innovations and GI databases can bridge the digital divide between the rural areas and increase the access to high-value markets.

8. CONCLUSION

The IP tools trademark and geographical indications (GI) plays an important role in development of rural areas, agricultural transformation and food distribution system. By protecting traditional knowledge, enabling product differentiation, enlarging marketing access, the preservation of agri-biodiversity and inclusive economic growth.

The cases of both Basmati rice and Darjeeling tea states about transformative potential and the challenges associated with IP implementation. The trademark and GI empower small farmers and their communities but effectiveness depends on institutional, legal and technological development.

The increase in potential of this IP tools requires a multi stakeholders approach such as government, producers, civil society and consumers with the support of legal reform, capacity building, policy framework and digitalisation. If this practice is followed correctly means trademark and GI serves as a powerful tool for sustainability agriculture in future, the supply value chain increases with food security.

REFERENCES

1. FAO (2020). The state of food and agriculture 2020: Overcoming water challenges in agriculture. Food and Agriculture Organization of the United Nations. https://doi.org/10.4060/cb1447en
2. WIPO (2021). Geographical indications: An introduction. World Intellectual PropertyOrganization.[https://www.wipo.int/publications/en/details.jsp?id=4520](https://www.wipo.int/publications/en/details.jsp?id=4520
3. Addor, F., & Grazioli, A (2002) Geographical Indications beyond Wines and Spirits: A Roadmap for a Better Protection for Geographical Indications in the WTO/TRIPS Agreement. The Journal of World Intellectual Property, 5(6), 865–897. https://doi.org/10.1111/j.1747-1796.2002.tb00188.x
4. Barham, E. (2003). Translating Terroir: The Global Challenge of French AOC Labeling. Journal of Rural Studies, 19(1), 127–138. [https://doi.org/10.1016/S0743-0167(02)00052-9](https://doi.org/10.1016/S0743-0167%2802%2900052-9)
5. Belletti, G., Marescotti, A., & Touzard, J.-M. (2015). Geographical Indications, Public Goods, and Sustainable Development: The Roles of Actors' Strategies and Public Policies. World Development, 98, 45–57. https://doi.org/10.1016/j.worlddev.2015.05.004
6. Bramley, C., Biénabe, E., & Kirsten, J. (2009). The Economics of Geographical Indications: Toward a Conceptual Framework for Geographical Indication Research in Developing Countries. In WIPO (Ed.), The Economics of Intellectual Property: Suggestions for Further Research in Developing Countries and Countries with Economies in Transition (pp. 109–147).
7. EUIPO. (2020). Geographical Indications in the EU: A Guide to the Registration Process. European Union Intellectual Property Office
8. WTO. (1995). Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). World Trade Organization.
9. Bowen, S., & Zapata, A. V. (2009). Geographical indications, terroir, and socioeconomic and ecological sustainability: The case of tequila. Journal of Rural Studies, 25(1), 108–119. https://doi.org/10.1016/j.jrurstud.2008.06.003
10. Bramley, C., Biénabe, E., & Kirsten, J. (2009). The Economics of Geographical Indications: Toward a Conceptual Framework for Geographical Indication Research in Developing Countries. In WIPO (Ed.), The Economics of Intellectual Property (pp. 109–147).
11. Das, K. (2010). Prospects and Challenges of Geographical Indications in India. The Journal of World Intellectual Property, 13(2), 148–201. https://doi.org/10.1111/j.1747-1796.2009.00394.x
12. Giovannucci, D., Barham, E., & Pirog, R. (2009). Defining and Marketing “Local” Foods: Geographical Indications for US Products. Journal of Food Distribution Research, 40(3), 103–115.
13. Teuber, R. (2010). Geographical Indications of Origin as a Tool of Product Differentiation: The Case of Coffee. Journal of International Food & Agribusiness Marketing, 22(3–4), 277–298. https://doi.org/10.1080/08974431003641353

14. Das, K. (2010). Prospects and Challenges of Geographical Indications in India. The Journal of World Intellectual Property, 13(2), 148–201. https://doi.org/10.1111/j.1747-1796.2009.00394.x
15. Jena, P. R., & Grote, U. (2010). Changing Institutions to Protect Regional Heritage: A Case for Geographical Indications in the Indian Agrifood Sector. Development Policy Review, 28(2), 217–236. https://doi.org/10.1111/j.1467-7679.2010.00484.x
16. Menapace, L., & Moschini, G. (2011). Quality Certification by Geographical Indications, Trademarks and Firm Reputation. European Review of Agricultural Economics, 39(4), 539–566. https://doi.org/10.1093/erae/jbr053
17. Ponte, S., & Gibbon, P. (2005). Quality Standards, Conventions and the Governance of Global Value Chains. Economy and Society, 34(1), 1–31. https://doi.org/10.1080/0308514042000329315
18. Josling, T. (2006). The War on Terroir: Geographical Indications as a Transatlantic Trade Conflict. Journal of Agricultural Economics, 57(3), 337–363. https://doi.org/10.1111/j.1477-9552.2006.00060.x
19. Rangnekar, D. (2004). The Socio-Economics of Geographical Indications: A Review of Empirical Evidence from Europe. UNCTAD-ICTSD Project on IPRs and Sustainable Development.
20. Sylvander, B., Barham, E., & Thévenod-Mottet, E. (2006). Development of Geographical Indications in the European Union. In Strengthening the Effectiveness of Geographical Indications as a Development Tool (pp. 17–24). FAO.
21. Belletti, G., Marescotti, A., & Touzard, J.-M. (2015). Geographical Indications, Public Goods, and Sustainable Development: The Roles of Actors' Strategies and Public Policies. World Development, 98, 45–57. https://doi.org/10.1016/j.worlddev.2015.05.004
22. Rana, M., & Mishra, D. (2022). Blockchain Technology in Agri-Food Supply Chains: Enhancing Transparency and Traceability. International Journal of Food Science and Technology, 57(3), 1024–1037. https://doi.org/10.1111/ijfs.15560