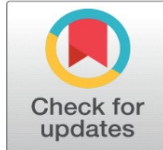
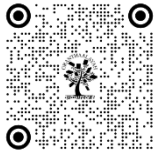


THE IMPACT OF GEOGRAPHICAL INDICATION TAGGING ON KASHMIRI SAFFRON: AN EMPIRICAL EVALUATION

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DOI

[10.29121/shodhkosh.v4.i2.2023.5576](https://doi.org/10.29121/shodhkosh.v4.i2.2023.5576)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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ABSTRACT

Geographical Indications (GIs) serve as a powerful tool for safeguarding the authenticity and heritage of regional products, while also fostering socio-economic development. Kashmiri saffron, a globally renowned GI-tagged product, symbolizes the rich agricultural tradition and cultural identity of the Kashmir Valley. The GI tag ensures the preservation of its unique characteristics—distinctive aroma, deep color, and medicinal properties—while protecting it from adulteration and market exploitation. The recognition not only enhances the product's global marketability but also uplifts the livelihood of local farmers by ensuring premium pricing. Moreover, the GI status strengthens the Kashmiri saffron industry's resilience against challenges like climate change and unfair competition, promoting sustainable agricultural practices. This paper explores the socio-economic implications of the GI certification for Kashmiri saffron, highlighting its role in preserving biodiversity, promoting rural development, and fostering equitable economic growth, thereby reinforcing its significance as both a cultural emblem and a driver of regional prosperity.

Keywords: Geographical Indications (GIS), Global Marketability, Kashmiri Saffron, Premium Pricing, Rural Livelihood, Socio-Economic Development, Sustainable Agriculture

1. INTRODUCTION

Geographical Indication (GI) as a form of intellectual property identifies goods originating from a specific territory, region, or locality, wherein their quality, reputation, and other characteristics are essentially linked to their geographical origin. GIs safeguard intangible economic assets such as the product's unique attributes and reputation by differentiating them in the marketplace.¹ Consumers frequently find it challenging to evaluate product quality without prior experience or conducting extensive research, as they usually possess limited information about the product's valuable attributes. Conversely, producers have a deeper understanding of their product's quality and unique characteristics compared to others in the market. This disparity results in information asymmetry, where producers might take advantage of consumers' lack of information by reducing the quality of goods. Geographical Indications (GIs) can address this issue by

¹ Kundan Kishore, "Geographical Indications in Horticulture: An Indian Perspective," Vol. 23 (4-5) *JIPR* 151-159 (2018).

offering consumers additional information about the product's quality and reputation, thereby equalising the information landscape. According to Shapiro's model on reputation, reputation acts as a signaling mechanism, conveying quality information to consumers and reducing their search costs.²

Studies have shown that consumers are willing to pay more for GI-labeled goods. The United Nations Conference on Trade and Development (UNCTAD) surveys indicate that consumers are ready to pay a premium of 10 to 15 percent for GI-registered agricultural products and 5 to 10 percent for non-agricultural products.³

The European Union championed the idea of GIs through the TRIPS Agreement (Trade-Related Aspects of Intellectual Property Rights), recognising intellectual property rights as essential for human development and introducing them systematically.⁴

Pascal Lamy, the former European Trade Commissioner, articulated the benefits of GI protection:

"they strengthen economic structures in farming communities by fostering additional industries, act as a wealth multiplier and collective right for communities, ensure that a product's name remains tied to its region of origin, promote a fairer distribution of added value between producers and distributors, enhance product quality and competitiveness, and contribute to the cultural heritage of countries and regions."⁵

In India, the significance of GIs is particularly high, with a vast array of GI-registered products in both agricultural and non-agricultural sectors.

2. KASHMIRI SAFFRON (*CROCUS SATIVUS* L.)

Saffron, the most expensive spice, carries a deep cultural significance and promotes both cultural identity and in-group cohesion within Kashmiri tradition, while also reflecting a multicultural perspective. Saffron (*Crocus sativus*) plays a crucial role in the economy and socio-cultural life of Jammu and Kashmir. Its uneven distribution, primarily confined to the *Karewas* in the southeastern valley, shows notable spatio-temporal variations in area and production. About 70 percent of the saffron cultivation and output is concentrated in Pulwama, contributing to roughly 16 percent of the region's total agricultural income. District Pulwama, commonly known as the "Saffron Bowl" of Kashmir, is dominant in saffron production, followed by Budgam and Srinagar districts. At a micro level, saffron cultivation is vital for socio-economic development. There is a strong correlation between saffron acreage and the socio-economic progress of households. Most farmers in Jammu and Kashmir are small-scale and marginal. The high initial investment required for saffron cultivation limits its expansion, as many low-income and small-scale farmers struggle to afford the costs. India has been a leading exporter of saffron globally, and over the past three decades, international trade in saffron has grown significantly. There is substantial potential for increasing saffron exports from producing countries, including India.⁶ Among the major agricultural products, saffron is one of the most important export products and plays a significant role in employment generation for the rural people of Kashmir. Over 17,000 family farmers are stewards of this traditional crop in Kashmir, with almost 9,000 farm families from the heritage site, consisting of about 66% from rural and 34% from peri-urban backgrounds.⁷

Moreover, the maximum annual income per farmer comes from saffron production, followed by apple cultivation.⁸

3. KASHMIRI SAFFRON: THE IMPACT OF GI TAGGING ON HERITAGE AND ECONOMY

Kashmiri Saffron has been assigned a Geographical Indication (GI) tag⁹ by the Geographical Indications Registry. With GI tagging of Kashmiri saffron, India became the only saffron-producing country to which GI has been assigned,

² Irene Calboli & Ng-Loy Wee Loon, *Geographical Indications at the Crossroads of Trade, Development and Culture: Focus on Asia-Pacific*, Cambridge University Press (ed., 2017).

³ *Id.* at 337.

⁴ Adithya Reddy & Siladitya Chatterjee, "A Critique of the Indian Law and Approach towards Protection of Geographical Indications with Specific Reference to Genericide," Vol. 12 (6) *JIPR* 553,573 (2007).

⁵ Adithya Reddy & Siladitya Chatterjee Reddy & Chatterjee, *Ibid*, at 572.

⁶ Arshida Rashid and Dar Javid Ahmad, "Socio cultural, economic values and constraints of Saffron in Kashmir valley" Volume 10, Issue 3 – *IJARM* (2023).

⁷ Natasha Saqib, "Geographical Indication as a branding tool for saffron", 1 *IJMSRR* 18 (2015).

⁸ Statement of case, Kashmir Saffron, available at: <http://www.ipindia.gov.in> (lasted visited on 2 January 2023).

⁹ It is worth noting that Kashmir Saffron is a registered GI vide application no. 635.

which boosted the prominence of the spice in the export market, thereby boosting exports as well as helping the farmers get the best price for economic stability. The GI certification has also put an end to the prevalent adulteration of saffron and the marketing of saffron cultivated in other countries under the guise of being produced in Kashmir.¹⁰

The price of Kashmir saffron has surged significantly, marking a substantial increase from Rupees 2 lakh per kilogram to Rupees 3.25 lakh per kilogram, making it nearly five times more expensive than silver. The surge has enabled traders to generate substantial profits, bringing optimism and financial stability to the growers.¹¹

After the GI tagging of Kashmiri saffron, it has regained prominence and has become highly sought-after in global markets.¹²

The GI tag acts as a crucial branding tool for “Kashmir Saffron,” offering preventive protection by providing producers with legal means to defend their reputation against unfair competition, especially from Iran. It also serves as an effective market-access tool, adding value to labeled products and ensuring better global market access. Producers can market products with specific, identifiable characteristics, leveraging this differentiation in both domestic and international markets as part of their marketing strategy. Furthermore, the GI tag supports rural development by enabling saffron producers to obtain premium prices in exchange for guarantees on production methods and quality, thereby adding value to the region of origin. It also promotes women employment, as women primarily handle the harvesting of flowers and separation of stigmas for “Kashmir Saffron.” Culturally, the GI tag enhances local and national identity, instilling pride in unique traditional products among producers and consumers. It can also indirectly boost tourism in the region.¹³

In this backdrop, the study aims to investigate the potential correlation between geographical indication and the socio-economic conditions of saffron growers, as well as the impact that GI has on it. It also addresses the issue of whether GI contributes to the improvement of the social and economic well-being of the growers.

4. UNIVERSE AND SAMPLING

The study has been carried in Kashmir Division of UT of Jammu and Kashmir. For the selection of the districts and tehsils, the researchers adopted a multi-stage purposeful approach of non-probability sampling technique focusing on the information rich locations. Consequently, the district Pulwama of South Kashmir was purposely selected as the world famous Saffron is being cultivated only in this region. Therefore, the present research study specifically targets the registered farmers of Pulwama district with a population of around 9,721. From Pulwama district, the researchers purposely selected the tehsil Pampore since more than 90% of land there is under saffron cultivation. Further in tehsil Pampore, 4 villages namely Khrew, Lethpora, Dussu and Koil have been selected as these constitutes the main saffron producing areas, accounting for 78% of total area under saffron in the Kashmir Valley. These areas are known for their ideal climatic and soil conditions that are conducive to saffron cultivation.

Sample Size

To determine an appropriate sample size, the researcher utilized Taro Yamane’s formula, which suggests a sample size of more than 384 respondents.

Taro Yamane Formula

$$n = \frac{N}{(1 + N(e)^2)}$$

Where:

n = Sample size

N = Population size

¹⁰ “Saffron farming in Kashmir: Status, future and issues”, available at: <http://www.jkpi.org>.

¹¹ “Kashmir Saffron regains prominence with geographical indication tag, fetching high prices”, available at: <http://www.agronfoodprocessing.com>, 7 July, 2023 (visited on 10 July, 2023).

¹² “Kashmiri Saffron gains more prominence with GI tagging”, available at: <http://www.greaterkashmir.com>, 22 June, 2022 (visited on 2 January 2023).

¹³ Geographical Indications (GI) play a significant role in promoting tourism in Kashmir (GI Tourism) by highlighting the region’s unique cultural heritage and high-quality products like Kashmiri Pashmina, Kani shawl or saffron, attracting tourists.

e = Margin of error (level of precision), expressed as a decimal

Given:

$N=9721$ (Population size)

$e=0.05$ (Margin of error)

Step-by-Step Calculation

Square the Margin of Error:

$e^2=(0.05)^2=0.0025$

Multiply the Population Size by the Squared Margin of Error: $N \times e^2=9721 \times 0.0025=24.3025$

Add 1 to the Result:

$1+N \times e^2=1+24.3025=25.3025$

5. DIVIDE THE POPULATION SIZE BY THIS RESULT

$n=1+N(e^2)N=25.30259721$ $n=384.191$

Final Sample Size: The sample size (n) is approximately 384.191.

When rounded to the nearest whole number, the sample size is 384.

To ensure that the sample accurately represents the entire district, the researchers employed Simple Random Sampling technique. A sample of 96 respondents is randomly selected from each village for data collection. The collected data is then analysed with appropriate statistical tools.

6. TOOLS AND TECHNIQUES

To assess the impact of GI tagging on socio-economic conditions of the growers, the researchers framed a questionnaire-cum-interview schedule consisting of two parts with Part A for assessing the position of saffron growers prior to GI tagging and Part B to analyse the socio-economic status of saffron growers post GI tagging. The questionnaire-cum-interview schedule was administered to the selected sample of respondents.

Data collected is quantitative in nature. The quantitative data has been interpreted with the statistical tools, methods where and when needed. Finally, the collected data was processed and analyzed with the help of various statistical tools viz., regressions analysis and t- test. These tools helped to interpret the results and to derive conclusion and suggestions.

Model Summary Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.181	.033	.029	4.29690

Predictors: (Constant), GI

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	185.869	1	185.869	10.067*	.002
Residual	5502.078	298	18.463		
Total	5687.947	299			

Dependent Variable: SE

Predictors: (Constant), GI

Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.

	B	Std. Error	Beta		
(Constant)	26.073	2.089		12.482*	.000
GI	.203	.064	.181	3.173*	.002

*Significant at 0.05 Level

The examination of the tables reveals that the model of prediction for the socio-economic conditions of growers explains a significant variance due to regression. In the model, R represents the correlation between the observed and predicted values of the criterion variable, which is found to be 0.181. The GI is identified as a significant predictor of the socio-economic conditions of growers for the total sample. The degree of predictability is 3.3%, as indicated by the multiple regression factor $R^2 = 0.033$, $F = 10.067$, $p < 0.05$. The tables also show that GI significantly impacts the socio-economic conditions of the total sample of respondents. Although the contribution of GI is low at 3.3%, it is statistically significant at the 0.05 level.

The ANOVA results (Table 2) indicate that the regression model is statistically significant, with an F-ratio of $F = 10.067$, $p < 0.05$. This confirms that the regression model is acceptable and that GI significantly affects the socio-economic conditions of growers.

Furthermore, Table 3 demonstrates that the standardized coefficient Beta, with a t-value for GI (Beta = 3.173, $p < 0.05$), is significant and positive. This indicates that variations in GI will cause a significant positive change in improving the socio-economic conditions of growers.

The results depicted above lead to the conclusion that GI tagging significantly impacts the socio-economic conditions of the saffron growers. The findings clearly demonstrate that GI has contributed fairly to adding value to the locally grown saffron and also improving its overall market access. However, as depicted the degree of probability is on the lower side. Thus, to maximize the impact of GI on saffron, it is crucial that reforms are implemented, with strict enforcement of relevant laws.

7. CONCLUSION AND SUGGESTIONS

The GI tagging of Kashmiri saffron has emerged as a transformative mechanism for preserving the cultural identity and unique attributes of this prized crop while offering significant socio-economic benefits to saffron growers. The findings clearly indicate that the GI certification has added value to locally produced saffron by enhancing its market access, protecting it from adulteration, and securing premium pricing for farmers. This has provided much-needed economic relief to growers and reinforced sustainable agricultural practices. However, while the impact of GI tagging is evident, the degree of probability for achieving its full potential remains modest.

To maximize its effectiveness, it is imperative to address existing gaps through targeted reforms, including stricter enforcement of GI-related regulations, capacity-building initiatives for farmers, and the development of robust marketing strategies to further improve global reach. Strengthening infrastructure for quality control and branding, coupled with greater collaboration between policymakers, local communities, and international stakeholders, will ensure that Kashmiri saffron continues to thrive both as a cultural emblem and a driver of economic development. With these measures in place, GI tagging can become a cornerstone for sustainable growth and resilience in the region's saffron industry.