P-ISSN 2322 - 0678 & E-ISSN 3048 - 9946
Gujarat Journal of Extension Education Vol. 40 : Issue 1 : December - 2025 https://doi.org/10.56572/gjoee.2025.40.1.0013

A COMPARATIVE ANALYSIS ON THE SOCIO-ECONOMIC STATUS AND INCOME PATTERN OF THE TOBACCO FARMERS

Senamiso L. Ndlovu[1] and Kumud Shukla[2]

1 PhD Research Scholar, School of Agriculture, Galgotias University, Greater Noida 203201
2 Associate Professor, School of Agriculture, Galgotias University, Greater Noida-203201
Email: kumud.shukla@galgotiasuniversity.edu.in

ABSTRACT

Tobacco farming in India and Zimbabwe has grown over the past five years, leading to notable shifts in the socioeconomic status of tobacco farmers. The present study provides a comparative analysis of the socioeconomic conditions of Flue-Cured Virginia (FCV) tobacco farmers in both countries. The study targeted a total of 160 FCV tobacco farmers. Six variables gender, land ownership, education level, age, income, and land utilization were used to assess their socioeconomic status. Data was collected through structured questionnaires. The results revealed that Zimbabwe had a more gender-inclusive farming structure than India, with gender ratios of 1:2 and 1:7, respectively. Land ownership differed between the two countries: 88.6% of Zimbabwean farmers owned their land, while only 11.4% cultivated on leased land. In contrast, 83.3% of Indian farmers operated on leased land, and only 16.7% owned their farms. Most tobacco farmers in both countries (55.6% in India and 45.7% in Zimbabwe) had attained an elementary level of education. The age distribution indicated that the majority of Zimbabwean farmers were middle-aged (41–50 years, 35.7%), whereas India had a greater proportion of older farmers (51–60 years, 40%). Indian farmers recorded a higher average family income (11.16 lakh) compared to their Zimbabwean counterparts (8.86 lakh). Similarly, Indian farmers cultivated larger land areas, averaging 5.43 hectares compared to 5.03 hectares in Zimbabwe. A Chi-square test was performed to examine the association between age and country, revealing a statistically significant difference. Furthermore, the Mann-Whitney test conducted on income data showed a significant difference between India and Zimbabwe in terms of tobacco income generation.

Keywords: *socio economic, tobacco farmers, comparative analysis, zimbabwe*

INTRODUCTION

Tobacco cultivation stands as one of the most significant cash crops globally with profound implications for farmer's livelihoods and national economies. India and Zimbabwe rank among the world's leading producers and represent distinct yet interconnected narrative in the global value chain (FAO STATS, 2021). India is the 2nd largest tobacco producer in the world whilst Zimbabwe is Africa's largest producer and the 4th producer of tobacco in the world (World Bank, 2017). Tobacco cultivation supports nearly 45.7 million in India and these are directly and indirectly employed by the sector (Sharma, 2021). Meanwhile in Zimbabwe the industry supports the livelihood of 1.5million people who are also directly and directly employed in the tobacco industry (Muroiwa et al, 2019).

In Zimbabwe and India, the tobacco industry also makes a substantial contribution to foreign exchange profits (Appau et al., 2019; Mutsvangwa- Sammi et al, 2018). Flue Cured Virginia (FCV) and other tobacco-related items brought in USD 861 000 and USD 550,000, respectively, for India as of 2023 (Tobacco Economics in India, 2021). Zimbabwe collected $USD 1.2 billion from its FCV exports that same year (TIMB, 2023). Millions of people worldwide rely on tobacco as a highly lucrative crop to support their lives (Bhandari, 2013). It can be cultivated in the underprivileged rural parts of both countries in less rich soils that are unsuitable for growing certain crops (TIMB, 2014; Indian Tobacco Board, 2020). This enables rural communities' most vulnerable members to export and provide a higher standard of living for their family (Guttula, 2019).

Despite their shared prominence in global tobacco production, India and Zimbabwe present contrasting socio-economic landscapes for tobacco farmers. India's sector is characterized by diverse cultivation practices across states like Andra Pradesh, Karnataka and Gujarat (Nisha et al, 2019). Tobacco cultivation in India operates under structured government regulation (Indian Tobacco Board, 2021). On the other hand Zimbabwean tobacco farming sector is characterized by flue cure variety that is mainly grown for export. The farmers get financial assistance from the international contract companies (Chingosho et al., 2020). The objective of this comparative analysis seeks to examine the differences and similarities between tobacco cultivation and socio economic development in India and Zimbabwe

exploring how farmer's income pattern and social status differ across two major tobacco producing nations. Also seeking tobacco growing practices that can improve the livelihood of the farmers in each country.

This comparative study on the socio-economic status will help policy makers in both countries in showing them which groups are more vulnerable. The study will also help the government and tobacco boards to design targeted income support, credit insurance and social protection schemes. Identifying education levels and age structures will help extension agencies in tailoring training methods that best suits the farmers. Comparing the income per household and land size in India and Zimbabwe will help the farmers and farmer organizations understand where productivity or price realization is lagging and advocate for better prices, inputs or services.

OBJECTIVE

To know the socio-economics status and income pattern of the tobacco farmers

METHODOLOGY

This study was conducted in Mashonaland West Province of Zimbabwe and Andhra Pradesh State of India, as tobacco is extensively cultivated in these regions. Mashonaland West consists of six blocks, of which Hurungwe, a major tobacco-producing district, was purposively selected. Hurungwe has 11 villages, and Chidamoyo and Mwami were purposively chosen due to their high levels of tobacco production. Andhra Pradesh comprises of 26 districts, and East Godavari district was purposively selected because of its extensive tobacco cultivation. Within the selected block, four villages Hukumpeta, Bommuru, Katheru, and Dowleswaramwere chosen based on the largest area under tobacco. From each village, 10% of the farmers were randomly selected.

The study covered six villages from two blocks in both countries, namely Rajamahendravaram Rural (India) and Hurungwe (Zimbabwe), yielding a total sample of 160 respondents. A pre-tested structured questionnaire was used to collect primary data through personal interviews with the selected farmers. The data collected was tabulated and analyzed using appropriate statistical tools such as frequency, percentage, mean, and standard deviation. The Chi square test was employed to examine the significance of the association between age and country, while the Mann Whitney U test was used to assess the significance of differences in income between tobacco farmers in India and Zimbabwe.

Ethical considerations

The researcher obtained a letter from Galgotias University to collect data from Andra Pradesh and Zimbabwe. The questions were tested before being distributed to the respondents to ensure clarity, reliability and validity of the study (Pilot study).

RESULTS AND DISCUSSION

Distribution of tobacco farmers in India and Zimbabwe according to gender, ownership of land and education level

Distribution of tobacco farmers in India and Zimbabwe by gender, landownership and education level reflects deep rooted social structures and shapes how benefits from the crop are shared between the two countries. The differences and similarities are highlighted in the results below.

Table 1: Distribution of tobacco farmers in India and Zimbabwe according to their socio-economic status (Gender, ownership of land and education level) (n=160)

Sr. No.	Category	INDIA (n=90)		ZIMBABWE (n=70)	
		Frequency	Percent	Frequency	Percent
A	**Gender Distribution**				
a	Male	79	87.80	48	68.60
b	Female	11	12.20	22	31.40
B	**Ownership of land**				
a	Leased	75	83.30	62	88.60
b	Owner	15	16.70	08	11.40
C	**Education Level**				
a	Primary	50	55.60	32	45.70
b	Secondary	37	41.10	26	37.10
c	Tertiary	03	03.30	12	17.10

The results in Table 1 shows that, although tobacco is a major cash crop for rural households in both countries, Zimbabwe exhibits a more gender-inclusive farming structure, with 31.4% women participants compared to 12.2% in India, as also supported by Chagwiza (2018). This difference may be attributed to Zimbabwe's land reform measures, which have contributed to increased involvement of women in agriculture. Demographic data further confirm that gender participation in tobacco-farming communities differs significantly between Zimbabwe and India.

The findings show that in India, 87.8% of tobacco farmers are men and only 12.2% are women, indicating that tobacco cultivation remains predominantly male-dominated. This pattern reflects traditional gender norms in Indian agriculture, where women contribute substantially to subsistence farming but often have limited involvement in cash crop production, a result consistent with the observations of Shukla & Singh (2018) and Bullough et al. (2014). The low rate of female participation in India also suggests possible barriers to women's access to land ownership, credit facilities, and decision-making roles within tobacco cultivation, a conclusion further supported by Singha & Kanna (2022).

Only 16.7% of tobacco farmers in India own their agricultural land, while the vast majority (83.3%) operates on leased plots. This indicates that the farming system in India is predominantly tenant-based, which may constrain long-term investment and undermine agricultural stability. This pattern is consistent with broader trends in Indian agriculture, where limited ownership rights and land fragmentation have impeded farmer empowerment and sustainable agricultural development, as reported by Mandal et al. (2019). In contrast, the situation in Zimbabwe is markedly different: only 11.4% of tobacco farmers cultivate leased land, whereas 88.6% own their farms. These high ownership rates reflect the outcomes of Zimbabwe's historical land redistribution programmes and the strategic importance of tobacco as a key cash crop in the national economy, a finding supported by Shonhe et al. (2022).

The educational differences between tobacco farmers in Zimbabwe and India reveal important disparities in human capital development, with potential implications for socioeconomic mobility and agricultural productivity. In India, 55.6% of tobacco farmers have only elementary education, 41.1% have secondary education, and just 3.3% have tertiary qualifications, indicating relatively low overall educational attainment; similar observations are reported by Barman et al. (2024). In Zimbabwe, 45.7% of tobacco farmers possess only primary education, 37.1% have completed secondary education, and 17.1% have attained tertiary education.

Given Zimbabwe's high unemployment rate, a growing number of tertiary-educated graduates are entering the relatively lucrative tobacco sector, contributing to the higher share (17.1%) of tertiary-educated farmers compared to India (3.3%). By contrast, the low proportion of tertiary-educated farmers in Andhra Pradesh may suggest that more educated individuals are being absorbed into research, development, and other non-farm economic sectors rather than engaging directly in tobacco cultivation.

Distribution of tobacco farmers in India and Zimbabwe according to age

Table 2: Distribution of tobacco farmers in India and Zimbabwe according to age and chi square test results

(n=160)

Sr. No.	Age characteristics (years)	INDIA (n=90)				ZIMBABWE (n=70)			
		Frequency	%	Mean	SD	Frequency	%	Mean	SD
1	**Age <31**	01	01.10	50.9	9.61	04	05.70	47.2	1.3
2	**Age 31–40**	07	07.80			17	24.30		
3	**Age 41–50**	31	34.40			25	35.70		
4	**Age 51–60**	36	40.00			13	18.60		
5	**Age >60**	15	16.70			11	15.70		
Chi square value 15.7672									
Significant value 0.003348**									

** means significant at 5%

According to Table 2, Indian tobacco farmers aged 41–50 years (34.4%) and 51–60 years (40.0%) constitute the largest cohorts, indicating an aging farming population with limited participation from younger age groups. In Zimbabwe, the highest concentration of farmers falls within the 41–50-year age group (35.7%), followed by those aged 31–40 years (21.4%). These findings align with the results of Mwangi and Crewett (2019) and Shukla and Singh (2018), who also reported that farmers in their 40s and 50s dominate tobacco cultivation, while youth involvement remains low.

This pattern may be attributed to the technical complexity and high capital requirements of tobacco farming, which older farmers are better positioned to meet due to greater financial resources and experience. However, the very low share of farmers aged 20–30 years in both countries (1.1% in India and 5.7% in Zimbabwe) raises concerns about the long-term sustainability of tobacco farming and the potential challenges in intergenerational transfer of knowledge and skills as the current cohort of older farmers retires.

There is a statistically significant association between age group and country. The age distributions for India and Zimbabwe are meaningfully different with certain age groups (notably 31-40 and 51-60) contributing most to this difference. The chi square value of 15.7672 is strong evidence that the distribution of age group is not the same in India and Zimbabwe

Distribution of annual family income generated by tobacco farmers in India and Zimbabwe

Table 3: Distribution of annual income generated by tobacco farmers in India and Zimbabwe (n=160)

Sr. No.	Class (₹ lakh)	INDIA (n=90)				ZIMBABWE (n=70)			
		Frequency	Percent	Mean	SD	Frequency	Percent	Mean	SD
1	**Lower Income Group** (< ₹ 9.79)	11	12.20	11.16	1.55	25	35.70	8.89	2.2
2	**Middle Income Group** (₹ 9.89 - 12.59)	67	67.80			33	47.20		
3	**Higher Income Group** (> ₹12.6)	18	20.00			12	17.10		
Mann Whitney U value = 1288.5									
Mann Whitney Z score = 6.401									

Income is a key indicator for assessing an individual's standard of living. When comparing the annual income trends of tobacco farmers in the two countries, a clear disparity emerges. Table 3 shows that the average annual income of tobacco farmers in India is 11.16 lakh, which is higher than the corresponding figure of 8.86 lakh for tobacco farmers in Zimbabwe. This result is similar to the findings of Masvongo (2013) for Zimbabwe.

An explanation for the higher annual family income in India is the greater degree of diversification among tobacco farmers into other high-value crops such as turmeric and oil palm, which enhances their overall income relative to their counterparts in Zimbabwe. This pattern indicates that Indian tobacco farmers are less dependent on tobacco alone and benefit from multiple income streams. The results are also similar to Balawada et al. (2018), who reported that tobacco farmers in India generate higher annual family incomes than non-tobacco farmers.

To determine whether there are any significant differences between the two nations' income and it's not by chance the study performed one tailed Mann Whitney U Test. The results were U statistic was 1288.5 and Z score of 6.401 and this indicated that there is a strong statistical significant difference in annual family income between the two countries. The difference is strongly highlighted in Table 3 that shows that Indian tobacco farmers earn an average of 11.16 lakh compared to Zimbabwean tobacco farmers who earn an average of 8.89lakh.

Distribution of land utilization by tobacco farmers in India and Zimbabwe

The data in Table 4 shows that Zimbabwe and India have different levels of land use efficiency. Zimbabwean farmers cultivate 5.03ha, whereas Indian farmers cultivate somewhat bigger average holdings of 5.43ha. The findings also align with Kumari et al, (2018) in the socio economic study on pulses. The standard deviations in Zimbabwe and India are 1.86 and 1.91, respectively. India's land advantage results in superior input optimization, as seen by the country's family income of 11.16 lakh in Table 3 against 8.86 lakh family income for Zimbabwe**.** Padmaja *et al.* (2015) observed the same results.

Table 4: Distribution of land utilization by tobacco farmers in India and Zimbabwe (n=160)

Sr. No.	Farm size (ha)	INDIA (n=90)				ZIMBABWE (n=70)			
		Frequency	Percent	Mean	SD	Frequency	Percent	Mean	SD
1	**Small** (Scale 1.5 - 3.4)	14	15.60	5.433	1.91	16	22.90	5.045	1.84
2	**Medium** (Scale 3.5 - 5.4)	32	35.60			28	40.00		
3	**Large** (Scale 5.5 - 9.4)	44	48.80			26	37.10		

The agricultural performance patterns of tobacco producers in Zimbabwe and India are different, according to this comparison analysis, with each nation exhibiting certain advantages and disadvantages. India's tobacco farmers tend to have higher incomes and cultivate slightly more land. Each country has lessons for the other. India demonstrates the benefits of higher value addition and diversification. While Zimbabwe shows the advantages of inclusivity and land tenure.

CONCLUSION

Several significant conclusions are drawn from this comparison of the socioeconomic standing and revenue trends of tobacco farmers in Zimbabwe and India. Among these is Zimbabwe, which has a female to male ratio of 1:2 in its tobacco farming industry, which is more gender inclusive than India's 1:7 ratio. There are significant differences in land tenure structures: most Indian tobacco farmers (83.3%) cultivate rented land, whereas 88.6% of Zimbabwean farmers own their land. This could have an impact on farm security and investment. Additionally, statistically significant results from Mann Whitney U test and Chi-Square testing show that Indian tobacco farmers manage somewhat larger plots and earn higher average family incomes than their Zimbabwean counterparts.

Given these differences, authorities in both nations are advised to strengthen ownership paths, improve farmer education, and encourage income diversification in order to boost resilience. Initiatives must address enduring disparities including youth engagement, gender fairness, and access to cutting-edge agricultural technologies as we look to the future. In order to inform the establishment of more inclusive and sustainable policies, additional study is required to examine long-term changes in market dynamics, environmental effects, and social welfare resulting from tobacco production.

RECOMMENDATIONS

(A) For Zimbabwe

(1) To enhance land ownership support. With 88.6% of farmers owning land, policies should focus on secure land titles and improving land use efficiency to empower farmers and increase productivity

(2) To improve education and training. The country has to address the high percentage of farmers with only elementary education by providing targeted agricultural training and literacy programs particularly aimed at middle- aged farmers (41- 50 years) to improve efficiency and income

(3) To increase access to credit and extension services by enhancing financial services and extension support to help farmers optimize land utilization and adopt better farming practices aiming to improve family income levels.

(B) For India

(1) To focus on land lease reformed. Given the high proportion of lease (83.3%) India ran facilitate secure and long-term lease agreements and encourage pathways to land ownership

(2) To upgrade farmer education and skill development by providing advanced training in modern agricultural technique

(3) To optimize land utilization by encouraging efficient use of larger land holdings (average 5.43ha to maximize yields and profitability

Both countries need to promote income diversification by encouraging farmers to diversify income sources beyond tobacco to mitigate risk. Also mutual collaboration between the two countries will better the livelihoods of the tobacco farmers in the two countries.

FUNDING

This research received funding from Galgotias University.

ACKNOWLEDGEMENT

The authors are thankful to Galgotias University for their support.

CONFLICT OF INTEREST

No conflict of interest among researchers.

REFERENCES

Appau, A., Drope, J., Witoelar, F., Chavez, J. J., & Lencucha, R. (2019). Why do farmers grow tobacco? A qualitative exploration of farmers' perspectives in Indonesia and Philippines. *International Journal of Environmental Research and Public Health, 16*(13), 2330. https://doi.org/10.3390/ijerph16132330

Balawada, H., Reddy, D. D., Krishna, S. K., Subbaiah, Y., & Kumari, N. A. (2018). Socio economic impact of flue cured tobacco in Northern Light Soils Zone of Andhra Pradesh. *Indian Journal of Extension Education, 54*(1), 65–71.

Barman, B., Mohammad, A., Mondal, I., Nath, R. K., Munshi, S. A., & Anand, B. (2024). Influence of socio economic background on educational attainment in rural Rajbanshi youth. *Asian Research Journal of Agriculture, 17*(4), 207–217. https://doi.org/10.9734/arja/2024/v17145

Bhandari, I. (2013). The importance of tobacco cultivation and trade in India's rural economy. *Tobacco Institute of India Analysis*.

Bullough, A., Guelich, U., Manolova, T. S., & Schjoedt, L. (2016). Women's entrepreneurship and culture: Gender role expectations and identities, social culture and the entrepreneurial environment. *Small Business Economics*, 1–12.

Bullough, A., Renko, M., & Myatt, T. (2016). Danger Zone Entrepreneurs: The Importance of Resilience and Self–Efficacy for Entrepreneurial Intentions. *Entrepreneurship Theory and Practice*, *38*(3), 473-499. https://doi.org/10.1111/etap.12006

Chingosho, Rutendo & Dare, Chengetai & van Walbeek, Corné. (2020). Tobacco farming and current debt status among smallholder farmers in Manicaland province in Zimbabwe.*Tobacco Control 30*(6) 130-136 DOI: 10.1136/tobaccocontrol-2020-055825.

Food and Agriculture Organization. (2021). FAOSTAT: Food and agriculture data. https://www.fao.org/faostat/en/#home

Guttula, M. K. (2019). Tobacco production and its role in India. *Acta Scientific Agriculture, 3*(6), 167–169. https://doi.org/10.31080/ASG.2019.03.0496

Indian Tobacco Board. (2021–2022). Annual report. https://tobaccoboard.com/publications/files/AR-2021-2022-1.pdf

Kumari, M. V., Kumar, M. A., & Singh, N. (2018). Study on socio-economic profile of the selected pulses growing farmers in Mahabubnagar District of Telangana State. *International Journal of Agriculture Sciences, 10*(12), 6428–6431.

Mandal, R., Joseph, S., Sahai, A.K. (2019). Real time extended range prediction of heat waves over India. *Sci Rep* **9**, 9008. https://doi.org/10.1038/s41598-019-45430-6

Masvongo, J., Mutambara, J., & Zvinavashe, A. (2013). Viability of tobacco production under smallholder farming sector in Mount Darwin District, Zimbabwe. *Journal of Development and Agricultural Economics, 5*(8), 295–301. https://doi.org/10.5897/JDE12.128

Muroiwa, J., Mushunje, A., & Musitini, T. (2019). Factors influencing smallholder farmer participation in tobacco contract farming arrangements in Mount Darwin district of Zimbabwe. *International Journal of Development and Sustainability, 7*(12), 2986–3001.

Mutsvangwa- Sammie, Manzungu & Siziba (2018) Key attributes of agricultural innovations in semi-arid smallholder farming systems in south-west Zimbabwe, Physics and Chemistry of the Earth, Parts A/B/C 105 125- 135 https://doi.org/10.1016/j.pce.2018.03.001.

Mwangi, M., & Crewett, W. (2019). Rural youth and horticultural commodity chains in Kenya: A gendered analysis. *The Journal of Development Studies, 5*(5), 679–696.

Nisha, N., Nain, M., & Aneja, C. (2019). Growth and analysis of area, production and productivity of wheat crop in Haryana and India. *Journal of Experimental Biology and Agricultural Sciences, 7*(3), 266–272. https://doi.org/10.18006/2019.7(3).266.272

Padmaja, G., Naik, D., & Paul, R. S. K. (2015). Cost and net returns of tobacco production in Prakasam District of Andhra Pradesh. *The Andhra Agricultural Journal, 62*(2), 460–463.

Sharma, R. K. (2021). Tobacco industry in India: Prospects and challenges. *Just Agriculture, 1*(10), 1–2.

Shonhe, T., Scoones, I., Mutyasira, V., & Murimbarimba, F.

(2022). Tobacco farming following land reform in Zimbabwe: New dynamics of social differentiation and accumulation. *Journal of Southern African Studies, 48*(2), 251–271. https://doi.org/10.1080/03057070.2022.2030954

Shukla, K., & Singh, N. (2018). Study of socio-economic status of onion farmers in Nashik District of Maharashtra. *International Journal of Agriculture Sciences, 10*(12), 6425–6427. https://www.bioinfopublication.org/jouarchive.php?opt=&jouid=BPJ0000217

Singha, R., & Kanna, S. (2022). Tobacco farming, addiction, promotion of gender equality, well-being and monopoly of the Indian market. *Journal of International Women's Studies, 23*(5), 155–172. https://vc.bridgew.edu/jiws/vol23/iss5/11

Tobacco Industry and Marketing Board. (2014). Annual statistical report. Tobacco Industry and Marketing Board.

Tobacco Industry and Marketing Board. (2023). Flue cured annual statistical report. Tobacco Industry and Marketing Board. https://www.timb.co.za/

World Bank. (2017). Agriculture for development: World development report 2008. Washington, DC. The World Bank

Received : October 2025 : Accepted : December 2025