

A Discriminant Analysis of Mode of Acquisition of Agricultural Land by Farm Women in Davanagere District of Karnataka

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ABSTRACT

A land resource is a person's identity and social standing. Farm women exhibit decision-making capabilities in household management, but this authority is often absent in agricultural enterprises. This precarious situation hampers rural farm women's ability to establish a stable income source. This study focused on the factors responsible for the acquisition of agricultural land by farm women in the Davanagere district of Karnataka. Here, discriminant function analysis was used. Among 150 farm women, the researcher selected 142 respondents, and the remaining 8 were excluded because they did not have any land. Through interviews and questionnaires, multistage selective random sampling was employed. From this analysis, grouping variables including inheritance, purchased, gifted, and leased-in were considered as acquisitions of land, and age, income, occupation, and education were the independent variables. From the analysis, education, income, and occupation emerged as the strongest factors influencing land acquisition. This paper recommends that the government make more income-generative initiatives, encourage higher education, and empower rural women.

Keywords: Discriminant analysis, agricultural land acquisition, farm women, Karnataka

JEL Codes: C38, J16, Q15, O13

I

INTRODUCTION

Land is a vital natural resource with the capacity to fulfil various functions, including economic and political roles, which contribute to shaping power dynamics within established governance systems among individuals, families, and communities (International Fund for Agricultural Development, 2008). Land stands out from other assets because it provides its owner with long-term security. Particularly in rural areas, women's land ownership serves as a positive motivator for improving their welfare and well-being. However, women's marginalization and uneven treatment are frequently caused by the fact that they do not own any land. Numerous studies conducted at the international, national, and local levels highlight the value of encouraging women to own land. Even while women in India are legally entitled to own land, the majority of them do not really utilize this privilege. Furthermore, even among individuals who own land, control over the land or the assets it produces is rarely exercised effectively (Hanstad and Nielsen, 2004). Also, owning land increases a woman's contribution to the household's overall well-being and gives her a more

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powerful voice (Sen, 1990). A small body of research suggests that granting women property ownership lowers their risk of poverty, benefits their children, and gives them more negotiating leverage within the married household (Kelkar, 2013). But when we examine the main barriers preventing women from accessing land, we find that they largely stem from legal, social, and administrative biases. For instance, the Indian Constitution's 9th Schedule offers an uncodified overview of rights, often known as "personal laws," that are oftentimes referred to as such. Every religion has its own set of personal laws. Compared with the customary law that predominated in both religions, the Hindu Succession Amendment Act of 2005 and the Muslim Personal Law Sharia (Application) Act of 1937 significantly improved women's property rights. However, the inclusion of agricultural land and the varied inheritance shares between men and women are what distinguish both communities' notable inequities (Agarwal, 1994).

In India, about 82% of people were Hindu and the remaining were Muslims. Some laws were made for both: The Hindu Succession Act of 1956 and the Muslim Personal Laws of 1937. Neither of the laws gave more importance to women, but the Hindu Succession Amendment Act of 2005 grants girls the same rights to their ancestors' property as sons and recognizes daughters as coparceners by birth in the family. Another option for providing women with security and the assets associated with property rights, while also serving as a stepping stone toward ownership, is for an NGO to buy land and lease it to a women's group or cooperative (Velayudhan, 2008). Government wasteland and ceiling surplus land have made up the majority of the land that states have dispersed. Government estimates indicate that, as of 2000, governments had allocated more than 14 million acres of wasteland and more than 5 million acres of surplus land under the ceiling to chosen beneficiaries (Government of India, Ministry of Rural Development, Annual Report 2000-2001). But the study conducted by RDI (West Bengal, Assam) identified a number of families that claimed to have obtained government-allocated land following the policy's introduction and asserted that the land had been given exclusively to the male head of household (Brown *et al.*, 2002). Recent empirical studies using digital land records confirm this gender disparity. Despite legislative changes, Jain *et al.* (2023) found that women continue to constitute a small percentage of landowners across all Indian states. According to Mahato *et al.* (2024), male heads of households remain predominantly represented in land records, and even when women's names are listed, their actual control over land decisions is minimal. Citing the cultural norm that "good women do not inherit land" as an example, Nitya Rao (2017) highlights how deeply rooted patriarchal views reinforce women's marginalization and disinheritance.

However, unfair laws alone cannot account for the full scope of women's disinheritance. Biases in society and the workplace are other sources of resistance. The severity of the problem is exacerbated by social behaviours, including marriage preferences, post-marriage housing decisions, willingly giving up parental land to

benefit brothers, etc. Additionally, the territorial gendering of space limits a woman's mobility and involvement in activities outside the home, which has negative effects on her ability to work, her ability to move around her job, her ability to maintain a sound economic standing, and finally, her exposure to the outside world (Agarwal, 2002).

While these issues are widespread at the national level, their intensity and manifestation often vary across regions, depending on local customs, land tenure systems, and state-level policy implementations. Karnataka provides a helpful subnational lens for examining these dynamics, given its long history of land reforms. In the early 1970s, Karnataka initiated land reforms aimed at providing land to the tiller, bringing about significant societal changes. While these reforms addressed inequalities in land distribution related to caste-class linkages, there was a notable oversight in addressing land issues for women. In the Davanagere district of Karnataka, the 2015-16 agriculture census reveals 50,912 female agricultural landholders and 177,308 male agricultural landholders (Davanagere District at a Glance, 2020-2021), highlighting the gender disparity in land ownership.

Despite numerous legal reforms and development initiatives, women's access to and management of agricultural land in India remains limited and unequal. Land is more than just a financial resource; it is ingrained in social and political power structures, and ownership often translates into enhanced agency, voice, and welfare for women. However, an array of studies has examined legal frameworks and general gender differences in land ownership, especially at the district level, such as in Davanagere (Karnataka); the dynamics of land acquisition by women remain under-researched. Although the currently available data indicate a sizable gender disparity in land holdings, it provides limited detail on the factors influencing women's property acquisition patterns. By examining the factors that influence farm women in the Davanagere district's means of acquiring land, this study seeks to bridge this research gap. By employing discriminant analysis, this study aims to identify key socioeconomic factors that substantially affect a woman's ability to inherit, purchase, lease, or receive agricultural property as a gift. Understanding these dynamics can inform better policy interventions to strengthen women's land rights and economic agency in rural India. Hence, this paper tested the hypothesis that there is no significant difference in the means of the independent variables (age, income, occupation, and education) across categories of land acquisition (inheritance, purchase, lease, and gift) among farm women.

II

METHODOLOGY

The study adopted an ex post facto research design to analyze the factors influencing women's access to agricultural land. This approach allowed for a systematic, empirical investigation of causal relationships between respondent

characteristics and their mode of land acquisition because the independent variables (age, income, education, etc.) were pre-existing and the researcher did not alter them.

The study was conducted in Karnataka's Davanagere district during the 2022–2023 agricultural year. A multi-stage stratified random sampling method was used to collect the data. Due to its high crop diversification, substantial female farming population, and unexplored location of women's land ownership, this district was purposefully selected. It comprises six taluks dispersed across the Central Dry Zone and the Southern Transition Zone, two agro-climatic zones. Purposively, three taluks—Channagiri, Harihara, and Jagaluru—were selected due to the higher rates of female rural households and agricultural production, particularly in the areas of vegetables, paddy, and arecanut. Based on the number of women involved in farming, five villages were chosen from each taluk with the assistance of regional organizations including Raitha Samparka Kendra's (RSKs), Gram Panchayats, Anganwadi workers, and local NGOs. A total of 15 villages were selected. RSK beneficiary lists and voter lists were used as sampling frames to randomly select 10 women's households from every village. Eight women who had no access to land were excluded from the 150 farm women selected for the study, leaving 142 respondents in total (because their inclusion would bias the discriminant analysis based on land-access modalities). Using a structured interview schedule developed after a review of the literature and expert consultations, primary data were gathered in May and June of 2023. A non-sample village was used to pre-test the schedule, and the necessary modifications were made to improve its relevance and clarity. Gender-sensitive data collection was conducted, ensuring the presence of female enumerators and fostering an inclusive environment for participants. Furthermore, direct observations and casual conversations were used to add contextual information to the survey responses. The most recent five agricultural censuses (1995–2016) provided secondary data for macro-level gender-disaggregated landholding information.

The grouped variables were classified as inherited, purchased, gifted, or leased. In the discriminant model, scores that ranged from 1 to 4 were assigned. While assessing fifteen independent variables, four important predictors were chosen for the discriminant function model based on multicollinearity diagnostics and theoretical relevance were age-divided into three categories: young (≤ 30), middle-aged (31–50), and elderly (> 50), a modified version of the Kuppaswamy scale (1976) was used to measure education level, occupation: main source of income and annual income—Hanchinal's (1999) classification of annual income was used to group it into low, middle, and high categories. These factors include socioeconomic and human capital traits that have been shown to affect Indian women's land rights. Although caste, marital status, and family size were also gathered, they were left out of the final model to prevent overfitting, their interaction effects could be investigated in subsequent models.

Discriminant Function Analysis (DFA), first introduced by R.A. Fisher (1936), was employed to identify the variables that best differentiate between the four modes of land acquisition. The dependent variable in this model is categorical, and the independent variables are continuous or interval-scaled. The model is given mathematically as (CRSP, B. 2004).

$$d = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

Where d is the discriminant score, a is the constant (intercept), b is the discriminant coefficient, X_1 , X_2 , X_3 , and X_4 represent age, occupation, educational level and income level, respectively. Multivariate normality and homogeneity of variance-covariance matrices across groups are reasonably assumed by using Box's M test for validation of the model. Eigenvalues and Wilk's Lambda were used to assess the significance and explanatory power of the discriminant functions. All statistical analyses were performed using IBM SPSS Statistics v26.

III

RESULTS AND DISCUSSION

Some of the selected factors, such as age, level of education, income, and occupation of farm women, were variables in land acquisition. These variables were used in the discriminant function analysis as predictors and grouping variables, respectively. Farm women are grouped by age, providing useful demographic data. Young (less than 30 years old), middle (30 to 50 years old), and old (more than 50 years old) are the three age categories for women. Here, 54% of the sample's farm women fall into the medium category, the largest share. Young women make up 28% of the population, while older women make up 18%.

Regarding level of education, which accounts for 32% of the sample, the majority of farm women have completed high school. Primary school (18.67%) and middle school (22%) categories also show significant participation in formal education. Pre-University College (12.67%) and illiterate (8.67%). Conversely, there are fewer women in the graduate (5.33%) and postgraduate (0.67%) categories who have higher levels of education.

The farm women are distributed by their yearly income in lakhs of rupees, highlighting the wide range of incomes among the respondents. The majority of the research area's farm women (57.33%) fall into the low annual income category, followed by high annual income (26%) and medium annual income (16.67%).

The grouping of farm women is based on their principal occupation. Here, farm women are divided into two groups that is those who work only in agriculture and those who combine agriculture with a secondary occupation. According to the data, 56% of the sample of farm women identify as having their primary occupation

as farming. On the other hand, 44% of women combine their primary occupation with one of their secondary occupations.

From the mode of acquisition of land, the farm women were divided into four categories: 43.33% of farm women acquire land through gifts, which may include dowry; 36.67% acquire land through inheritance; 9.33% were able to buy land; 5.33% are able to lease it; and 5.33% are unable to do so. Most of the land is accessed through inheritance and gifts. This confirms that most of the farm women in Davanagere district of Karnataka were not affected by a lack of property rights.

The grouping variable of the acquisition of land is categorised into four groups: inherited, purchased, gifted, and leased.

TABLE 1. STATISTICAL PARAMETERS OF THE CORRELATION

Function	Eigenvalues				
	Eigen value	% of Variance	Cumulative %	Canonical Correlation	Proportion of variance %
1	0.103 ^a	66.5	66.5	0.306	9.36
2	0.049 ^a	31.6	98.1	0.216	4.66
3	0.003 ^a	1.9	100.0	0.054	0.29

The discriminant function's effectiveness is portrayed in Table 1. Whether a farm woman acquires land through inheritance, purchase, gift, or lease is the grouping variable, and the canonical correlation of 0.306 for Function 1 shows that the model accounts for 9.36% of the variation in that variable. The model appears to explain 4.66% and 0.29% of the variation for functions 2 and 3, respectively, with canonical correlation coefficients of 0.216 and 0.054. This demonstrates how well the model accounts for variance among the grouping variables. Function 1 explains 66.5% of the variance in group differences and has a moderate canonical correlation (0.306), suggesting that it moderately distinguishes between land acquisition groups. Function 2 accounts for an additional 31.6% of the variance, but with a weaker canonical correlation (0.216). Function 3 explains only 1.9%, which is negligible and not meaningful for interpretation, suggesting that other variables (possibly age, household size, or marital status) contribute little. The first function has the highest eigenvalue, and the last function has the lowest eigenvalue.

The discriminant analysis suggests that the first function (Function 1), which is likely dominated by variables such as income, education, and occupation, is the most meaningful in separating land acquisition modes (inheritance, purchase, dowry, gift). The other two functions add very little explanatory power. The moderate canonical correlation (0.306) implies that socioeconomic empowerment partially explains access to land, but institutional and structural barriers (e.g., caste, marital status, dowry practices, etc.) may still limit women's autonomy. Menon (2014) also

discussed how socio-economic status intersects with gender, where women from wealthier or higher-caste families may have better access to land ownership, while marginalized groups face greater difficulties.

Wilks' Lambda provides the percentage of total variability not explained by the discriminant functions in Table 2, while also indicating the relevance of the discriminant functions. It evaluates the contribution of each level of an independent variable to the model. The scale ranges from 0 to 1, with 0 denoting complete discrimination and 1 denoting none. Only function 1 in the table above denotes a very significant function ($p \leq 0.05$) and indicates the percentage of overall variability that cannot be explained. Compared to the other two functions, function 1 is more closely related to zero, which means that it leans more toward total discrimination than non-discrimination. Lambda ranges from 0 to 1, and the smaller the lambda, the more the independent variable serves the discriminant function. This analysis reveals that land acquisition is statistically shaped by a specific set of socioeconomic predictors, and these predictors are not equally important; only the first discriminant function provides meaningful insights. Halagundegowda (2017) also highlighted that the application of discriminant function analysis to identify key socioeconomic factors influences farmers' behaviour, in their case, drought coping mechanism adoption.

TABLE 2. WILKS' LAMBDA

Wilks' Lambda				
Test of Function(s)	Wilks' Lambda	Chi-square	Df	Sig.
1 through 3	0.861	20.444	12	0.05**
2 through 3	0.950	6.977	6	0.32
3	0.997	0.404	2	0.81

Using Table 3, Function 1's education score (0.945) was the best factor, followed by Function 2's income level score (0.823) and Function 3's occupation score (0.942). This indicates that the four categories of land acquisition were better predicted by education, income level, and occupation. The variables that most substantially influence group assignment are those with the highest coefficients.

TABLE 3. STANDARDIZED CANONICAL DISCRIMINANT FUNCTION COEFFICIENTS

Standardized Canonical Discriminant Function Coefficients			
Factors	Function		
	1	2	3
Education	0.945	-0.246	-0.150
Age	-0.011	0.396	-0.198
Occupation	0.130	-0.137	0.942
Income	0.320	0.823	0.111

Source: Author analysis

Table 4 demonstrates that Function 1 has the highest absolute association with education, Function 2 with income level, and Function 3 with employment. This indicates that the best variables for gaining land in the Davanagere district of Karnataka are occupation, income, and education. The correlations between each variable and the discriminant function are displayed in the structure matrix table. The best factors for each discriminant function can be determined by calculating the largest load values for each function. Education serves as Function 1, income serves as Function 2, and occupation serves as Function 3.

TABLE 4. STRUCTURE MATRIX

Factors	Structure Matrix		
	Function		
	1	2	3
Education	0.934	-0.282	-0.200
Income	0.327	0.866	0.189
Age	-0.064	0.540	-0.182
Occupation	0.097	-0.034	0.969

The combination of income and education creates a path to land acquisition autonomy. Income-generating, educated women may be better able to negotiate in the market, pursue inheritance claims, or legally register land granted to them. A division between women who work directly in agriculture and those who work in marginal or uncertain careers is reflected in the occupation's continuous relevance. Under less formal circumstances, women who do not work in conventional farming may lease or receive land as a gift, indicating that land access is a livelihood adaptation. Intersectional elements like caste, patriarchy, and marital systems shouldn't be disregarded. For instance, the dowry system discussed earlier in the paper is fundamentally connected to land gifts. Ignoring legal issues surrounding women's ownership rights when land is handed over during marriage and discovering this kind of acquisition as neutral poses the risk of perpetuating gender inequality. Roy (2015) also emphasizes that income and education empower women to better access and negotiate land ownership, but these benefits are shaped by enduring social systems such as dowry, caste, and patriarchal inheritance norms. Legal reforms may not always translate to practical ownership, as dowry continues to serve as a substitute for property rights.

Tables 5-7 present the cross-tabulation of farm women's occupational categories by mode of land acquisition. The results in Table 5 indicate that a majority of farm women in the study area are primarily engaged in agriculture, while a smaller proportion combines agriculture with subsidiary occupations.

TABLE 5. CROSS TABULATION OF MODE OF ACQUISITION OF LAND AND OCCUPATION

Acquisition	Occupation		Total
	Agriculture	Agriculture labour + Subsidiary	
Inheritance	30(54.54)	25(45.45)	55(100)
purchased	9(64.24)	5(35.14)	14(100)
Gifted	37(56.92)	28(43.07)	65(100)
Leased	5(62.5)	3(37.5)	8(100)
Total	81(57.04)	61(42.9)	142(100)

Sources: Author analysis

The distribution of land acquisition modes shows that gifts, including dowry, constitute a major source of land access. Among women whose primary occupation is agriculture, 56.92 per cent acquired land through gifts, compared with 43.07 per cent among those engaged in agriculture along with subsidiary occupations. Inheritance also represents an important mode of acquisition, accounting for 54.54 per cent and 45.45 per cent, respectively. Market-based modes of acquisition are comparatively limited. Land acquired through purchase accounts for 64.24 per cent among women engaged solely in agriculture and 35.14 per cent among those combining agriculture with subsidiary occupations. Similarly, leased land constitutes 62.5 per cent and 37.5 per cent across the two occupational groups, respectively. Overall, the results indicate that farm women primarily engaged in agriculture account for a larger share across all modes of land acquisition, reflecting the central role of agriculture in their livelihood structure in the study area.

These findings suggest that access to land is stratified by class and economic status. While those in paid or subsidiary jobs rely more on market or informal leasing and choices, indicating lower economic security, women who are actively farming may benefit from traditional kin-based land transfers. Importantly, the findings reveal that even among agricultural women, a sizable percentage (43-45%) obtained land outside of inheritance, suggesting a variety of land transfer methods, such as dowry, gifting, or purchase. Agrawal (2002) also finds that women's land acquisition is not solely through inheritance but also via dowry, gifts, and purchases, often influenced by their economic status and social norms.

From Table 6, it is clear that in the study area, about 32.39% of farm women completed high school. This is due to the facilities provided by the state government to educate girls. But to some extent, education is mitigated, possibly due to marriage, low economic status, and social stigma. So the farm women acquire land through gifts, including dowries, which account for about 27.69% of the land acquired by middle- and high-schooled farm women, followed by primary (24.61%), pre-university college (10.76%), and illiterate (9.23%).

TABLE 6. CROSS TABULATION OF MODE OF ACQUISITION OF LAND AND EDUCATION

Acquisition	Education							Total
	Illiterate	Primary	Middle	High	PUC	UG	PG	
Inheritance	4 (7.27)	8 (14.5)	4 (7.2)	22 (40)	9 (16.3)	7 (12.7)	1 (1.8)	55
Purchased	1 (7.1)	2 (14.2)	3 (21.4)	6 (42.8)	2 (14.2)	0 (0)	0 (0)	14
Gifted	6 (9.2)	16 (24.6)	18 (27.6)	18 (27.6)	7 (10.7)	0 (0)	0 (0)	65
Leased	2 (25)	2 (25)	2 (25)	0 (0)	1 (12.5)	1 (12.5)	0 (0)	8
Total	13 (9.1)	28 (19.7)	27 (19.0)	46 (32.3)	19 (13.3)	8 (5.6)	1 (0.7)	142

Sources: Author analysis

Similarly, inheritance remains an important source of land ownership among farm women. The highest proportion of inherited land is observed among high school-educated women (40 per cent), followed by pre-university (16.3 per cent), primary (14.5 per cent), undergraduate (12.7 per cent), and middle school (7.2 per cent) categories. These patterns suggest that family-based land transfers continue to play a central role in women's access to land. Land acquisition through purchase is comparatively limited but shows a greater concentration among women with high school education (42.8 per cent), followed by middle school (21.4 per cent) and pre-university education (14.2 per cent). This indicates that women with moderate levels of education may be relatively more inclined towards market-based acquisition of agricultural land.

Leasing is the least common mode of acquisition and is primarily observed among illiterate, primary school-educated, and middle school-educated women (25 per cent each). This suggests that women with lower educational attainment may rely more on temporary access arrangements than on ownership. Overall, the findings suggest that while traditional channels such as inheritance and gifting remain dominant, educational attainment appears to influence the mode of land acquisition. Similar observations have been reported by Bina Agarwal, who noted that women often obtain land not only through inheritance but also through dowry, gifts and purchases, depending on socio-economic conditions.

Particularly educated women are increasingly granted favour in inheritance and purchase routes, probably because they are better able to interact with formal processes, comprehend land documents, and are more conscious of their rights. Even if gifted land is more widely distributed across educational levels, patriarchal customs such as land transfers during marriage (as part of the dowry) may still be reflected in it. Higher-educated women may reject or resist these typical transfers in favour of more independent means of acquisition, as evidenced by the lack of UG/PG degree holders in this category. These pathways are shaped by informality and social

reliance, as evidenced by the prevalence of illiterate women in the leased and gifted groups. These forms may not be enforceable by law, making them more susceptible to eviction. Roy (2015) notes that educated women are increasingly favoured in inheritance and land purchase pathways, likely due to their ability to engage with formal institutions, comprehend legal documents, and assert their property rights.

TABLE 7. CROSS TABULATION OF MODE OF ACQUISITION OF LAND AND INCOME

Acquisition	Income			Total
	Low	Medium	High	
Inheritance	29(52.72)	11(20)	15(27.27)	55(100)
Purchased	5(35.71)	5(35.71)	4(28.57)	14(100)
Gifted	36(55.38)	9(13.84)	20(30.76)	65(100)
Leased	8(100)	0(0)	0(0)	8(100)
Total	78(54.92)	25(17.60)	39(27.46)	142(100)

Sources: Author analysis

Table 7 presents the cross-tabulation of household income categories by mode of land acquisition. The results show that a majority of farm women in the study area belong to the low-income group (54.92 per cent), followed by the high-income group (27.46 per cent) and the medium-income group (17.60 per cent). Across all income categories, inheritance and gifts remain the dominant modes of land acquisition. Among low-income farm women, 52.72 per cent acquired land through inheritance, compared with 20 per cent in the medium-income group and 27.27 per cent in the high-income group. A similar pattern is observed for gifted land, which accounts for 55.38 per cent among low-income farm women, 13.84 per cent among medium-income women and 30.76 per cent among high-income women.

Land acquisition through purchase shows similar proportions across income groups, at 35.71 per cent among both low- and medium-income groups and 28.57 per cent among high-income farm women. This suggests that direct market acquisition of land remains limited even among higher-income respondents. In contrast, leasing is predominantly observed among low-income farm women (100 per cent), indicating their reliance on temporary access to land for agricultural production. This pattern reflects the economic constraints faced by low-income households in acquiring land ownership. Overall, the results suggest that family-based transfers remain the principal pathway to women's land access, whereas market-based and temporary arrangements are more common among economically constrained groups.

One of the main factors that facilitates or impedes land access is income. Despite being the majority in number, low-income women acquire land mostly through informal, non-market means (leases, gifts, and inheritance). Although they are fewer in number, high-income women have greater agency to purchase land independently, indicating that class-based stratification exists even among women. The lack of women with medium or high incomes in leasing suggests that this is a necessity-driven adaptation for the impoverished, sometimes undertaken under

informal contracts or with unstable tenure, rather than a planned choice. Menon (2004) also finds that women from higher-income groups are more likely to secure formal ownership through purchase or inheritance, while those from lower-income brackets depend largely on informal arrangements such as leasing or gifting, which tend to offer precarious tenure and limited security.

IV

CONCLUSION AND POLICY RECOMMENDATIONS

This study employed discriminant function analysis and descriptive cross-tabulations to critically investigate the socioeconomic factors impacting the various ways that women in the Davanagere area of Karnataka acquire agricultural land. The findings clearly show that women's access to land is greatly influenced by socioeconomic status, occupation, and education, while age, patriarchy, and cultural norms continue to play a substantial but underrated role. A statistical investigation reveals that the most significant discriminant among the various methods of acquiring land is education. Women with higher levels of education are more likely to inherit and own land, reflecting their capacity to understand legal systems and defend their property rights. The ability to buy land or acquire land through familial transfers is strongly correlated with income levels. Gifting and leasing, which frequently lack tenure security, are the main sources of income for lower-income women. The dynamics of land access are influenced by occupation; agricultural workers and those in secondary occupations are less able to use formal channels and must rely on leasing or culturally mediated transfers. The results also show that although traditional forms like inheritance and gifting are prevalent, gender norms like dowry practices, which limit women's full possession and legal control over land, often act as a mediating factor. For underprivileged and marginalized women, leasing, on the other hand, appears as a last resort tactic, highlighting systemic weaknesses in tenure and land markets. This emphasizes that purchasing land is a complicated process influenced by social norms, gender, class, marital status and institutional accessibility rather than just being an economic choice. Women will continue to be excluded from secure land ownership unless these multifaceted obstacles are removed, especially for those who are impoverished or have lower levels of education.

To promote equitable land access among women in agrarian settings, there is a pressing need for comprehensive policy interventions. Prioritizing legal literacy programs is necessary to increase women's knowledge of and ability to claim their land rights, especially in situations where traditional customs predominate. Tenure security can be strengthened by making land transfers easier to formalize, particularly through inheritance and gifting, which would guarantee that women's names are consistently listed in property records. Independent land acquisition can be made possible by increasing landless and economically vulnerable women's access to credit and subsidized land purchase programs. Simultaneously, women involved in tenant farming can benefit from the creation of a gender-sensitive land leasing system with

legal protections. Lastly, it is possible to guarantee that women are not excluded because of informal ownership by coordinating land access procedures with rural development initiatives.

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