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PATH ANALYSIS SHOWING THE EFFECT OF PROFILE OF AGRICULTURAL STUDENTS WITH THEIR ATTITUDE TOWARDS AGRIPRENEURSHIP

Jayasudha J.[1], R. M. Naik[2] and P. N. Patel[3]

1Assistant Professor, Dept. of Agril. Extension, SRS Institute of Agriculture and Technology, Vedasandur (TN) - 624 710
2 Rtd. Principal and Dean, N. M. College of Agriculture, NAU, Navsari - 396450
3 Ph.D. Scholar, Dept. of Agril. Extension & Communication, N. M. College of Agriculture, NAU, Navsari - 396450
Email: sudhajaganathan97@gmail.com

ABSTRACT

Agripreneurship can be considered as a tool for rejuvenating the socio-economic conditions of rural poor which mainly includes employment creation, income generation, poverty reduction and overall improvement in health, nutrition and food security. The objective of this study is to find how various characteristics of agriculture students influence their attitude towards agripreneurship. The present study was conducted among the agriculture students in State Agricultural Universities of Gujarat. By simple random sampling technique, 300 students were selected as respondents. The data was collected through interview schedule. The results shows that risk-taking ability, achievement orientation, and critical thinking exerted the strongest positive direct effects and were significant at the 1 per cent probability level. Similarly, leadership ability, innovativeness, and source of information contributed positively and were significant at the 5 per cent level. On the contrary, background-related variables such as parents' occupation, type of family, and parents education showed negative direct influences, highlighting that inherited socio-demographic conditions may not always nurture entrepreneurial attitudes. The correlation results shows that shows that source of information (0.395**), risk taking ability (0.559**), achievement orientation (0.540**), leadership ability (0.509**), critical thinking (0.473**), self confidence (0.294**) and innovativeness (0.408**) were significantly correlated with the attitude towards agripreneurship at 1 per cent level of significance. These five independent variables together accounted 44.80 per cent variation in attitude of the students towards agripreneurship.

Keywords: *attitude, agriculture, agripreneurship, students, gujarat.*

INTRODUCTION

Indian agriculture serves numerous needs, including employment, livelihood, and environmental security (Vinaya et al., 2017). The government is concerned about the alarming rise in unemployment, especially among educated individuals (Rathod *et al*, 2025). Entrepreneurs are people who realize new opportunities and channelize effort in the proper direction (Herrington *et al.,* 2008). Before taking any action, we must assess people's attitudes toward entrepreneurship, especially those with higher education, in order to provide solutions to improve this. An economic agent who is essential to a nation's economic growth is the entrepreneur. An emerging aspect of agriculture is entrepreneurship. The growth of entrepreneurship and society's socioeconomic progress are closely linked (Parmar *et al*, 2024). A transition from agriculture to agribusiness is indeed a vital route to foster Indian agriculture sector and to make the sector more attractive and profitable. Agripreneurship can be considered as a tool for rejuvenating the socio-economic conditions of rural poor which mainly includes employment creation, income generation, poverty reduction and overall improvement in health, nutrition and food security in the Indian economy (Bairwa *et al*., 2014). Agriculture students, as future professionals in the agri-food sector, play a vital role in driving this transformation. Their attitudes towards agripreneurship significantly influence their willingness to engage in entrepreneurial ventures after graduation. Positive attitudes can lead to higher levels of innovation, risk-taking, and enterprise creation, which are essential for sustainable agricultural development. Conversely, unfavourable attitudes may result in limited adoption of entrepreneurial opportunities, perpetuating traditional and less profitable farming practices. Understanding the factors that shape students' attitudes towards agripreneurship is therefore essential. *Path analysis* offers a robust analytical approach to explore these complex relationships. It enables the decomposition of causal relationships among variables, thereby revealing both direct and indirect effects of students' profile characteristics on their attitude towards agripreneurship.

OBJECTIVE

To assess how various characteristics of agriculture students influence their attitude towards agripreneurship

METHODOLOGY

The study was conducted among M.Sc. (Agri.), Ph.D. (Agri.) and final year B.Sc. (Agri.) students from Navsari Agricultural University, Junagadh Agricultural University, Anand Agricultural University and Sardarkrushinagar Dantiwada Agricultural University in Gujarat. *Expost facto* research design was used for the study. The 25 respondents were selected from each degree in each university was selected by simple random sampling technique, thus the total sample size is 300. The profile of the students were independent variables which are age, gender, area of residence, monthly family income, type of family, size of family, parents education, parents occupation, business background, size of land holding, spending leisure time, family support, source of information, trainings undergone, risk taking ability, achievement orientation, leadership ability, critical thinking, self-confidence and innovativeness. The dependent variable is attitude towards agripreneurship. The research philosophy is positivism, where students' profiles objectively affect their attitude towards agripreneurship and that these effects can be measured statistically. The deductive research approach means general to specific has applied here. Quantitative methodology has been used here. The data was collected by survey using interview schedule by interview method. Time horizon is Cross-Sectional Study, data is collected at one point in time. The statistical tools used was correlation, stepwise regression and path analysis. The SPSS software version 21.0 has used for correlation and stepwise regression. For path analysis, OPSTAT has used. Path analysis helps to identify the magnitude and nature of causal relationships among variables, providing a clearer understanding of the complex interrelationships that simple correlation or regression analysis cannot reveal. This techniques are followed by Sanjay *et al.* (2024).

RESULTS AND DISCUSSION

The data in Table 1, shows that source of information (0.39^{**}), risk taking ability (0.55^{**}), achievement orientation (0.54^{**}), leadership ability (0.50^{**}), critical thinking (0.47^{**}), self confidence (0.29^{**}) and innovativeness (0.40^{**}) were significantly correlated with the attitude towards agripreneurship at 1 per cent level of significance. It is evident that the students who had high risk taking ability, achievement orientation, leadership ability, critical thinking, self confidence and innovativeness which are the qualities of entrepreneur had the positive attitude towards agripreneurship.

Table 1: Relationship between the profile of students and their attitude towards agripreneurship

(n=300)

Sr. No.	Independent Variables	Coefficient of correlation (r)
X_1	**Age**	0.13^{*}
X_2	**Gender**	0.08^{NS}
X_3	**Area of residence**	0.01^{NS}
X_4	**Monthly Family Income**	0.12^{*}
X_5	**Type of family**	-0.10^{NS}
X_6	**Size of family**	0.00^{NS}
X_7	**Parents education**	0.00^{NS}
X_8	**Parents occupation**	-0.07^{NS}
X_9	**Business background**	0.13^{*}
X_{10}	**Size of Land holding**	0.02^{NS}
X_{11}	**Spending leisure time**	0.01^{NS}
X_{12}	**Family support**	0.13^{*}
X_{13}	**Source of information**	0.39^{**}
X_{14}	**Trainings undergone**	0.14^{*}
X_{15}	**Risk taking ability**	0.55^{**}
X_{16}	**Achievement orientation**	0.54^{**}
X_{17}	**Leadership ability**	0.50^{**}
X_{18}	**Critical thinking**	0.47^{**}
X_{19}	**Self confidence**	0.29^{**}
X_{20}	**Innovativeness**	0.40^{**}
**Significant at 0.01 level of probability *Significant at 0.05 level of probability		

The variables such as age (0.13^{*}), monthly family income (0.12*), business background (0.13*), family support (0.13*) and trainings undergone (0.14^{*}) were significantly correlated with the attitude towards agripreneurship at 5 per cent level of significance.

As the individuals age increases, they may have accumulated more knowledge, experience, and resources over time, making them more inclined towards exploring entrepreneurial opportunities in agriculture. Higher income levels provide individuals with greater financial stability and resources, reducing the perceived risk associated with starting a business. Students with background in business exerted positive attitude towards agripreneurship. Participation in agripreneurship training programs may increase individuals' knowledge about the agricultural business landscape, enhance their skills, and provide networking opportunities, all of which contribute to a more favourable attitude towards agripreneurship. Individuals who receive support from their families regarding their entrepreneurial endeavors are more likely to have a positive attitude towards agripreneurship. Such

support can boost individuals' confidence and motivation to pursue agripreneurship, leading to positive attitude.

The variables such as gender (0.08^{NS}), area of residence (0.01^{NS}), size of family (0.00^{NS}), parents education (0.00^{NS}), size of land holding (0.02^{NS}), and spending leisure time (0.01^{NS}) were non-significantly correlated, while type of family (-0.10^{NS}) and parents occupation (-0.07^{NS}) had negative and non-significant correlation with the attitude of the students towards agripreneurship.

Rathod *et al.* (2025) found that family land holding, participation in extra-curricular activities and source of information were positively and significantly correlated with entrepreneurial attitude of under graduate students. Further, family income and achievement motivation had positive and highly significant relation with attitude. Zala *et al*. (2024) revealed that parents' occupation, family type, and attending entrepreneurship workshop were found positively significant with the attitude of the girl students at 1% level of significance. Annual family income was found positively significant with the attitude of the girl students at 5% level of significance.

Table 2: Stepwise multiple regression analysis of independent variables and attitude towards agripreneurship

(n=300)

Sr. No.	Independent variables	Partial regression coefficient (b)	Standard error	Multiple Correlation Coefficient 'R'	Adjusted R^2
	(Constant)	27.38	5.22	0.67	0.448
(X_{15})	**Risk taking ability**	0.87**	0.19		
(X_{16})	**Achievement orientation**	0.60**	0.14		
(X_{17})	**Leadership ability**	0.33**	0.16		
(X_{18})	**Critical thinking**	0.42**	0.13		
(X_{20})	**Innovativeness**	0.44**	0.17		
**Significant at 0.01 level probability					

These five independent variables together accounted 44.80 per cent variation in attitude of the students towards agripreneurship.

By following model, a result of stepwise regression analysis is as;

$$Y = a + b_{15}X_{15} + b_{16}X_{16} + b_{17}X_{17} + b_{18}X_{18} + b_{20}X_{20}$$

Where,

Y = Attitude

a = the intercept i.e., 27.38

b_{15} = Coefficient of partial regression of Y on X_{15} i.e. 0.19

b_{16} = Coefficient of partial regression of Y on X_{16} i.e. 0.14

b_{17} = Coefficient of partial regression of Y on X_{17} i.e. 0.16

b_{18} = Coefficient of partial regression of Y on X_{18} i.e. 0.13

b_{20} = Coefficient of partial regression of Y on X_{20} i.e. 0.17

X_{15} = Risk taking ability

X_{16} = Achievement orientation

X_{17} = Leadership ability

X_{18} = Critical thinking

X_{20} = Innovativeness

Therefore, the fitted equation would be as under:

$$Y_3 = 27.38 + (0.19)\,X_{15} + (0.14)\,X_{16} + (0.16)\,X_{17} + (0.13)\,X_{18} + (0.17)\,X_{20}$$

Table 3: Path coefficient showing the direct, total indirect and substantial indirect effects of independent variables on attitude towards agripreneurship

(n=300)

Sr. No.	Variables	Direct effect	Total indirect effect	Substantial indirect effect through
X_1	**Age**	-0.05	0.18	0.05 (X_{15})
X_2	**Gender**	0.04	0.03	0.01 (X_{15})
X_3	**Area of residence**	-0.03	0.05	0.01 (X_{16})
X_4	**Monthly Family Income**	0.05	0.06	0.01 (X_{15})
X_5	**Type of family**	-0.08	-0.02	0.00 (X_1)
X_6	**Size of family**	0.00	-0.00	0.01 (X_{20})
X_7	**Parents education**	-0.06	0.06	0.02 (X_8)
X_8	**Parents occupation**	-0.09	0.01	0.01 (X_7)
X_9	**Business background**	0.06	0.06	0.02 (X_{15})
X_{10}	**Size of Land holding**	0.01	0.01	0.00 (X_3)
X_{11}	**Spending leisure time**	0.00	0.00	0.00 (X_1)
X_{12}	**Family support**	0.06	0.06	0.02 (X_{15})
X_{13}	**Source of information**	0.09*	0.29	0.09 (X_{15})
X_{14}	**Trainings undergone**	0.06	0.07	0.02 (X_{15})
X_{15}	**Risk taking ability**	0.22**	0.33	0.11 (X_{16})
X_{16}	**Achievement orientation**	0.21**	0.32	0.11 (X_{15})
X_{17}	**Leadership ability**	0.12*	0.38	0.11 (X_{15})
X_{18}	**Critical thinking**	0.16**	0.31	0.10 (X_{15})
X_{19}	**Self confidence**	-0.04	0.33	0.08 (X_{16})
X_{20}	**Innovativeness**	0.11*	0.29	0.08 (X_{15})
Residual: 0.504				

Direct effect

The data in Table 3 and Fig 1 revealed that risk taking ability (0.22) had exerted highest direct positive effect, followed by achievement orientation (0.21), critical thinking (0.16), leadership ability (0.12), innovativeness (0.11), source of information (0.09), business background (0.06), family support (0.06), training undergone (0.06), monthly family income (0.05), gender (0.04), size of land holding (0.01), size of family (0.00) and spending leisure time (0.00).

As far as negative direct effect is concerned area of residence (-0.03), self confidence (-0.04), age (-0.05), parents education (-0.06), type of family (-0.08) and parents occupation (-0.09) exerted direct negative effect on their attitude of the students towards agripreneurship.

From the above results, it can be concluded that among independent variables, risk taking ability had exerted highest positive direct effect, whereas, area of residence exhibited highest negative direct effect on attitude of students.

Among the independent variables, risk taking ability (0.22) exhibited the highest positive direct effect on attitude towards agripreneurship. This indicates that students who possess greater willingness to take calculated risks tend to show more favourable attitudes towards choosing agriculture as a business venture. The result aligns with the theoretical premise that risk-taking is a core entrepreneurial trait that drives innovation and business initiation. Similar findings

were reported by previous studies, which emphasized that students with a higher propensity to take risks are more likely to explore agripreneurial opportunities and adopt modern agribusiness models.

Achievement orientation (0.21) and critical thinking (0.16) also exerted notable positive direct effects, suggesting that individuals with strong goal-directed behaviour and the ability to analyze and solve problems logically are more inclined to develop a positive entrepreneurial mindset. Leadership ability (0.12) and innovativeness (0.11) further strengthened this relationship, implying that personal competencies such as initiative, creativity, and decision-making skills are significant determinants in shaping favourable agripreneurial attitudes.

Other factors like source of information (0.09), business background (0.06), family support (0.06), and training undergone (0.06) had smaller but meaningful positive direct effects. These findings underline the importance of exposure, experiential learning, and support systems in influencing students' perception of agripreneurship as a viable career. Access to information and training may increase awareness of entrepreneurial opportunities and reduce perceived barriers to entry.

In contrast, certain variables exerted negative direct effects on agripreneurial attitude. Notably, parents' occupation (-0.09) and type of family (-0.08) negatively influenced attitude, indicating that students from non-agricultural or non-business family backgrounds and joint family systems may face social or economic constraints that limit entrepreneurial aspirations. Similarly, parents' education (-0.06) and age (-0.05) had small negative effects, possibly reflecting generational differences and lower entrepreneurial motivation among older students. The area of residence (-0.03) also exhibited a mild negative direct effect, suggesting that students from rural areas might perceive agripreneurship as less attractive due to lower access to facilities, networks, and markets.

Total indirect effect

It is observed from the Table 3, leadership ability (0.38) had highest positive total indirect effect, followed by risk taking ability (0.33), self confidence (0.33), achievement orientation (0.32), critical thinking (0.31), source of information (0.29), innovativeness (0.29), age (0.18), trainings undergone (0.07), family support (0.06), business background (0.06), parents education (0.06), monthly family income (0.06), area of residence (0.05), gender (0.03), parents occupation (0.01), size of land holding (0.01) and spending leisure time (0.00).

As far as negative total indirect effect, it is exerted by size of family (-0.00) and type of family (-0.02).

From the above results, it can be concluded that leadership ability exerted highest positive total indirect effect whereas size of family exhibited highest negative total indirect effect on attitude of students towards agripreneuship.

Substantial indirect effect

Data further revealed that out of 20 independent variables, eleven variables were routed through risk taking ability, three routed through achievement orientation, two routed through age, one routed through parents occupation, one routed through innovativeness, one routed through parents education and one routed through area of residence.

With regards to substantial indirect effect, the highest substantial indirect effect on attitude was put forth by achievement orientation (0.11) through risk taking ability, followed by risk taking ability (0.11) through achievement orientation, leadership ability (0.11) through risk taking ability, critical thinking (0.10) through risk taking ability, source of information (0.09) through risk taking ability, innovativeness (0.08) through risk taking ability, self confidence (0.08) through achievement orientation, age (0.05) through risk taking ability, parents education (0.02) through parents occupation, family support (0.02) through risk taking ability, size of land holding (0.02) through risk taking ability, business background (0.02) through risk taking ability, gender (0.01) through risk taking ability, size of family (0.01) through innovativeness, monthly family income (0.01) through risk taking ability, parents occupation (0.01) through parents education, area of residence (0.01) through achievement orientation, size of land holding (0.00) through area of residence, spending leisure time (0.00) through age and type of family (0.00) through age.

From the above results, it can be concluded that the variables such as risk taking ability, achievement orientation and critical thinking had the direct effect on attitude of students which is positive and significant at a 1 per cent level of probability. The variables leadership ability, innovativeness and source of information were positive and significant at 5 per cent level of probability with the attitude of the students towards agripreneurship. This naturally suggests that positive increase in risk taking ability, achievement orientation, critical thinking, leadership ability, innovativeness and source of information would bring the substantial change in the attitude of students towards agripreneurship. The results are in line with the finds of Prajapati et al. (2025); Rajendran et al. (2025); Kumar and Thakkar (2024); Vinaya et al. (2017).

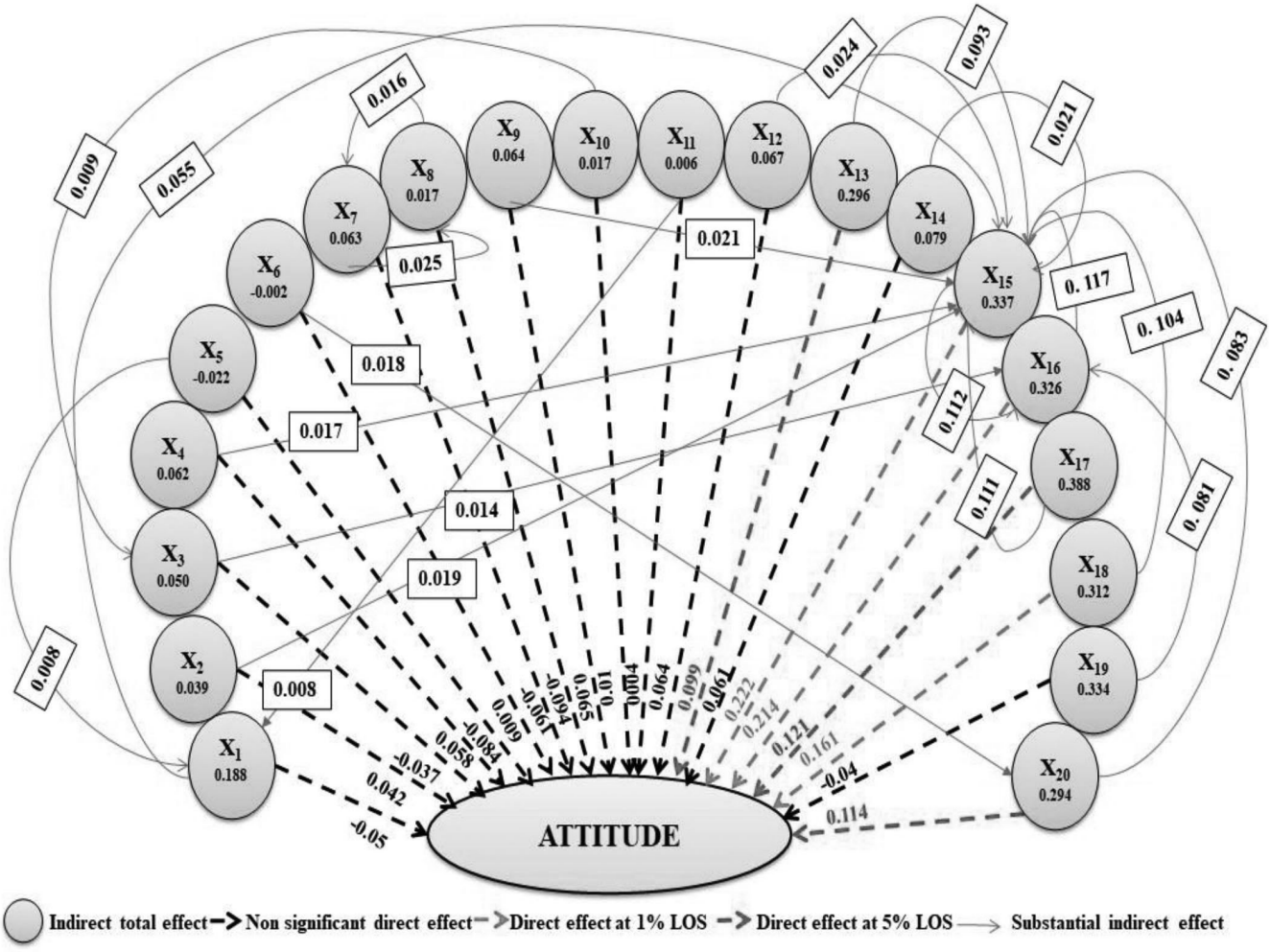

Fig. 1: Path coefficients showing direct, total indirect and substantial indirect effect of independent variables on attitude towards agripreneurship

CONCLUSION

The path coefficient analysis clearly revealed that psychological and behavioural traits played a more decisive role than demographic factors in shaping students' attitude towards agripreneurship. Among the independent variables, risk-taking ability, achievement orientation, and critical thinking exerted the strongest positive direct effects and were significant at the 1 per cent probability level. Similarly, leadership ability, innovativeness, and source of information contributed positively and were significant at the 5 per cent level. On the contrary, background-related variables such as parents' occupation, type of family, and parents' education showed negative direct influences, highlighting that inherited socio-demographic conditions may not always nurture entrepreneurial attitudes.

The analysis of total and substantial indirect effects further emphasized the mediating role of risk-taking ability and achievement orientation, through which several other variables exerted their influence. Leadership ability was found to be the most potent indirect contributor, while type of family and size of family exhibited marginal negative effects.

Overall, the findings suggest that strengthening students' risk orientation, achievement motivation, critical thinking, leadership qualities, innovativeness, and access to information can substantially enhance their attitude towards agripreneurship. These results have important implications for agricultural universities, policymakers, and extension agencies in designing entrepreneurship development programs, where greater emphasis should be given to skill-building and personality enhancement rather than relying solely on socio-economic background.

Additionally, integrating qualitative methods such as focus group discussions or in-depth interviews would provide richer insights into the socio-psychological dimensions underlying entrepreneurial behaviour in agriculture. Expanding the model to include external factors

like access to technology, institutional support, and market linkages could further strengthen understanding and guide more holistic intervention strategies.

IMPLICATIONS

1 **Entrepreneurship Training Programs:** Universities and training institutes should design modules that specifically focus on improving risk-taking ability, achievement orientation, leadership, and critical thinking among students. Experiential learning, business simulations, and case-based teaching can be effective tools.

2 **Skill Development Initiatives:** Capacity-building programs must integrate activities that encourage **innovative thinking and problem-solving**, as these variables significantly shape agripreneurial attitudes.

3 **Information Access and Networking:** Since source of information showed a notable effect, developing strong knowledge-sharing platforms, digital hubs, and mentorship networks can help students remain updated on opportunities, technologies, and markets.

4 **Policy Focus:** Policymakers should prioritize schemes that incentivize entrepreneurial skill-building (e.g., risk management workshops, start-up incubation support) rather than depending solely on family background or economic status as criteria for support.

5 **Family and Community Engagement:** Awareness programs can be directed at families to encourage support for students' entrepreneurial aspirations, thereby reducing the negative influence of certain family-related factors.

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CONFLICT OF INTEREST

There is no conflict of interest among any authors regarding publication of the research paper in the journal as well as in the content.

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