

ENTREPRENEURIAL BEHAVIOUR INDEX: A TOOL FOR ASSESSING DAIRY FARMERS

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ABSTRACT

Entrepreneurial behaviour plays a crucial role in enhancing the profitability, sustainability, and commercialization of dairy enterprises. The present study was undertaken to develop and standardize an Entrepreneurial Behaviour Index (EBI) for dairy farmers. Initially, eighteen entrepreneurial behaviour indicators were identified through an extensive review of literature and consultation with scientists and extension functionaries. The identified indicators were subjected to relevancy analysis using expert opinion from 50 judges belonging to the relevant disciplines. The experts evaluated each indicator on a five-point relevancy continuum. Relevancy Percentage, Relevancy Weightage, and Mean Relevancy Score were computed for all indicators. The final set of seventeen indicators were retained for the index. The relative weightage of each indicator was determined through expert judgment by assigning scores out of 100 according to their importance in entrepreneurial behaviour. The validity of the developed index was established through content validity using expert opinion. Reliability of the index was tested using Cronbach's alpha coefficient. The obtained Cronbach's alpha value of 0.96 indicated excellent internal consistency and reliability of the developed index. The developed Entrepreneurial Behaviour Index provides a comprehensive and scientifically reliable tool for assessing entrepreneurial behaviour among dairy farmers.

Keywords: dairy farmers, entrepreneurial behaviour, index

INTRODUCTION

Dairy farming plays a crucial role in the Indian agricultural economy and serves as an important source of livelihood for millions of rural households. Besides contributing significantly to agricultural growth and national income, the dairy sector provides employment opportunities, income generation, asset creation, nutritional security, and financial stability to rural communities. Livestock farming also acts as a safeguard against crop failure and helps sustain farming systems under changing agricultural and climatic conditions (Prasad *et al.*, 2016).

In recent years, the dairy sector has undergone substantial transformation with increasing commercialization, technological advancement, and market orientation. As dairy farming gradually shifts from a subsistence activity to an enterprise-driven profession, entrepreneurial competencies among dairy farmers have become increasingly important for the successful management and sustainability of dairy enterprises. Entrepreneurship development among dairy farmers is considered essential for enhancing productivity, improving farm income, and promoting rural welfare. Entrepreneurial dairy farmers are more likely to identify opportunities, respond effectively to market changes, and

transform dairy farming into a profitable and sustainable agribusiness venture. Entrepreneurial behaviour among commercial dairy farmers therefore plays a significant role in strengthening the economic viability and long-term sustainability of dairy enterprises (Somtiya *et al.*, 2024).

Entrepreneurship development is a continuous and dynamic process influenced by several socio-personal, psychological, and economic factors. The entrepreneurial propensity of farmers is shaped by important behavioural traits such as innovativeness, achievement motivation, decision-making ability, leadership ability, risk orientation, and information-seeking behaviour. Understanding these entrepreneurial characteristics and the factors influencing them is important for designing effective extension interventions, entrepreneurship development programmes, and policy initiatives aimed at strengthening dairy entrepreneurship (Parmar *et al.*, 2024).

Examining the entrepreneurial profile of successful dairy farmers may provide useful insights into the background factors and behavioural attributes associated with entrepreneurial success (Khandave *et al.*, 2022; Sipai *et al.*, 2023). Such findings can further motivate and guide other farmers towards adopting entrepreneurship-oriented

approaches in dairy farming.

Despite the growing importance of entrepreneurship in the dairy sector, the availability of standardized tools for assessing entrepreneurial behaviour among dairy farmers remains limited. Measurement of entrepreneurial behaviour is essential for identifying entrepreneurial potential, evaluating training needs, and formulating suitable developmental strategies. Therefore, there is a need to develop a reliable and valid index that can comprehensively measure entrepreneurial behaviour among dairy farmers. Keeping this in view, the present study was undertaken to develop and standardize an Entrepreneurial Behaviour Index for dairy farmers.

OBJECTIVE

The present study aimed to construct an index for measuring the entrepreneurial behaviour of dairy farmers

METHODOLOGY

Identification of Entrepreneurial Behaviour Indicators

The development of the Entrepreneurial Behaviour Index (EBI) began with the identification of dimensions representing entrepreneurial characteristics among dairy farmers. A comprehensive review of literature related to entrepreneurship, behavioural studies, and agricultural extension research was undertaken. In addition, consultations and discussions were held with scientists, extension educators, and extension functionaries to identify the major dimensions influencing entrepreneurial behaviour. Based on the review and expert consultation, eighteen indicators were initially identified, namely innovativeness, achievement motivation, decision making ability, emotional stability, risk taking behaviour, planning ability, coordinating ability, information seeking ability, market intelligence, self-confidence, competition orientation, leadership ability, economic motivation, scientific orientation, thirst for knowledge, persuasiveness, profit orientation, and foresight.

Relevancy Analysis of Indicators

To assess the suitability and relevance of the identified indicators for inclusion in the Entrepreneurial Behaviour Index, a relevancy analysis was conducted. For this purpose, structured schedules and Google Forms were administered to 50 experts from the disciplines of Extension Education. The experts were requested to evaluate each indicator on a five-point continuum ranging from “Most Relevant” to “Not Relevant” with scores of 5, 4, 3, 2, and 1, respectively. They were also encouraged to suggest additional indicators relevant to entrepreneurial behaviour.

The responses obtained from the experts were

analyzed using the following statistical measures:

$$\text{Relevancy \%} = \frac{(\text{MR} \times 5) + (\text{R} \times 4) + (\text{SWR} \times 3) + (\text{LR} \times 2) + (\text{NR} \times 1)}{\text{Maximum possible score}} \times 100$$

$$\text{Relevancy Weightage} = \frac{(\text{MR} \times 5) + (\text{R} \times 4) + (\text{SWR} \times 3) + (\text{LR} \times 2) + (\text{NR} \times 1)}{\text{Maximum possible score}}$$

$$\text{Mean Relevancy Score} = \frac{(\text{MR} \times 5) + (\text{R} \times 4) + (\text{SWR} \times 3) + (\text{LR} \times 2) + (\text{NR} \times 1)}{\text{Number of judges responded}}$$

Where:

MR = Most Relevant

R = Relevant

SWR = Somewhat Relevant

LR = Less Relevant

NR = Not Relevant

Indicators having a relevancy percentage greater than 75.00, relevancy weightage above 0.75, and mean relevancy score exceeding 3.75 were retained for the final index construction.

Selection and Weightage of Indicators

Based on the relevancy analysis, sixteen indicators satisfied the prescribed selection criteria. Two indicators, namely emotional stability and foresight, did not meet the minimum cut-off values and were excluded from the final index. Further, the experts suggested an additional indicator, namely “e-readiness,” considering the increasing importance of digital competency in dairy entrepreneurship. Thus, a total of seventeen indicators were finally retained for the construction of the Entrepreneurial Behaviour Index.

To determine the relative importance of each selected indicator, the same panel of experts was requested to distribute a total score of 100 points among the seventeen indicators according to their perceived contribution towards entrepreneurial behaviour. The average scores obtained were considered as the weightage values for the respective indicators.

Computation of Entrepreneurial Behaviour Index

The overall Entrepreneurial Behaviour Index of each respondent was computed using the weighted scores of the selected indicators. The following formula was employed for calculating the index:

$$\text{EBI} = \left(\frac{R_1}{M_1}\right) \times W_1 + \left(\frac{R_2}{M_2}\right) \times W_2 + \dots + \left(\frac{R_n}{M_n}\right) \times W_n \times 100$$

Where:

EBI = Entrepreneurial Behaviour Index

$R_1, R_2, \dots, R_n$ = Score obtained by the respondent for each entrepreneurial behaviour indicator

$M_1, M_2, \dots, M_n$ = Maximum obtainable score for each indicator

$W_1, W_2, \dots, W_n$ = Relative weightage assigned to each indicator

Validity of the Index

The validity of the developed index was established through content validity. Content validity refers to the extent to which the items included in an instrument adequately represent the domain of the construct under study. The content and structure of the index were critically examined through extensive review of literature and expert consultation.

Since the selected indicators comprehensively represented the conceptual dimensions of entrepreneurial behaviour identified from literature and expert opinion, the index was considered to possess satisfactory content validity.

Reliability of the Index

Reliability refers to the degree of consistency

and dependability of a measurement tool. To assess the reliability of the developed index, data were collected from 60 randomly selected dairy farmers. The internal consistency of the Entrepreneurial Behaviour Index was tested using Cronbach's alpha coefficient (Jagriti *et al.*, 2026; Singh *et al.*, 2026; Shukla *et al.*, 2026; Sahu *et al.*, 2026). The obtained Cronbach's alpha value of 0.96 indicated excellent internal consistency and high reliability of the developed index, suggesting that the tool was dependable for assessing entrepreneurial behaviour among dairy farmers.

RESULTS AND DISCUSSION

Relevancy Analysis of Entrepreneurial Behaviour Indicators

The relevancy analysis of the initially identified entrepreneurial behaviour indicators was carried out based on expert opinion. The indicators were evaluated using relevancy percentage, relevancy weightage, and mean relevancy score.

Table 1: Relevancy analysis of entrepreneurial behaviour indicators as perceived by experts

Sr. No.	Indicators	Relevancy %	Relevancy Weightage	Mean Relevancy Score	Remarks
1	Innovativeness	95.20	0.952	4.76	Selected
2	Achievement motivation	88.40	0.884	4.42	Selected
3	Decision making ability	91.20	0.912	4.56	Selected
4	Emotional stability	74.80	0.750	3.74	Not Selected
5	Risk taking behaviour	92.00	0.920	4.60	Selected
6	Planning ability	87.60	0.876	4.38	Selected
7	Coordinating ability	82.80	0.828	4.14	Selected
8	Information seeking ability	86.80	0.868	4.34	Selected
9	Market intelligence	86.40	0.864	4.32	Selected
10	Self confidence	93.20	0.932	4.66	Selected
11	Competition orientation	79.60	0.796	3.98	Selected
12	Leadership ability	88.80	0.888	4.44	Selected
13	Economic motivation	87.20	0.872	4.36	Selected
14	Scientific orientation	84.80	0.848	4.24	Selected
15	Thirst for Knowledge	82.40	0.824	4.12	Selected
16	Persuasiveness	82.80	0.828	4.14	Selected
17	Profit orientation	86.40	0.864	4.32	Selected
18	Foresight	74.80	0.750	3.74	Not Selected

The findings revealed that innovativeness secured the highest relevancy percentage (95.20%), followed by self-confidence (93.20%), risk taking behaviour (92.00%), and decision-making ability (91.20%). These findings indicate that experts perceived these dimensions as highly important in determining entrepreneurial behaviour among dairy farmers.

The indicators emotional stability and foresight

recorded comparatively lower relevancy values and failed to satisfy the prescribed selection criteria. Therefore, these indicators were excluded from the final index construction. The remaining sixteen indicators fulfilled the selection criteria and were retained in the final Entrepreneurial Behaviour Index. Additionally, "e-readiness" was incorporated into the index based on expert recommendations, resulting in a final set of seventeen indicators.

Component-wise Weightage of Entrepreneurial Behaviour Indicators

The relative importance of the selected entrepreneurial behaviour indicators was assessed through expert judgment.

Table 2: Component-wise Weightage Values for the Entrepreneurial Behaviour Index

Sr. No.	Indicators	Weightage
1	Innovativeness	8.42
2	Achievement motivation	6.34
3	Decision making ability	6.94
4	Risk taking behaviour	7.36
5	Planning ability	5.90
6	Coordinating ability	5.24
7	Information seeking ability	6.00
8	Market intelligence	6.40
9	Self confidence	6.74
10	Competition orientation	5.26
11	Leadership ability	5.72
12	Economic motivation	5.36
13	Scientific orientation	4.94
14	Thirst for Knowledge	5.12
15	Persuasiveness	4.58
16	Profit orientation	5.09
17	e-Readiness	4.59

The component-wise weightages assigned by the experts indicated that innovativeness received the highest weightage (8.42), followed by risk taking behaviour (7.36), self-confidence (6.74), and decision-making ability (6.94). The comparatively higher weightages assigned to these indicators suggest their significant contribution towards entrepreneurial behaviour among dairy farmers. Indicators such as persuasiveness (4.58), e-readiness (4.59), and scientific orientation (4.94) received relatively lower weightages; however, they were still considered important dimensions in assessing entrepreneurial behaviour.

The assigned weightages facilitated the development of a comprehensive and balanced Entrepreneurial Behaviour Index by accounting for the relative contribution of each indicator.

CONCLUSION

The present study successfully developed and standardized an Entrepreneurial Behaviour Index for assessing entrepreneurial behaviour among dairy farmers. Through systematic identification, screening, and validation procedures, seventeen relevant indicators representing entrepreneurial characteristics were finalized. The index

demonstrated satisfactory content validity based on expert judgment and extensive literature support. Further, the reliability analysis revealed a high Cronbach's alpha coefficient, confirming excellent internal consistency of the developed instrument.

The developed index can serve as a useful tool for researchers, extension personnel in assessing entrepreneurial behaviour among dairy farmers. It may also assist in identifying entrepreneurial gaps and designing suitable capacity-building programmes for promoting dairy entrepreneurship.

IMPLICATIONS

- (1) The findings of the study provide valuable insights into the entrepreneurial behaviour of dairy farmers and enhance the understanding of entrepreneurship in the dairy farming sector.
- (2) The developed index can serve as a useful tool for systematically measuring and assessing entrepreneurial traits and competencies among dairy farmers, thereby supporting future research and entrepreneurship development initiatives in the dairy sector.

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CONFLICT OF INTEREST

No conflict of interest among researchers

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