CHAPTER II

A REVIEW OF LITERATURE

Introduction

Following the previous introductory chapter, this second chapter presents a brief review of literature pertaining to (1) the development of thought in the field of entrepreneurship, which falls in the disciplines of (i) economics, (ii) psychology and (iii) sociology; (2) the identification of various characteristics of entrepreneurs; and (3) development of research on agricultural entrepreneurship, with a focus on Indian studies. These are presented in three successive sections.

Section One

Entrepreneurship: Development of Thought

The concept of entrepreneurship is universal and age old.
Thiruvalluvar\textsuperscript{1}, 2000 years ago, gave crisp verses on the concept of entrepreneurship and the importance of ‘agriculture’ which we find today in so many words in different disciplines.

The Economic Perspective

In the documented modern literature, Economics may rightfully claim to be the originator of the concept. The recognition of the concept of entrepreneurs dates back to the 18\textsuperscript{th} century France when economist Richard Cantillon\textsuperscript{2} (Circa 1730) associated the risk-bearing activity in the economy with the entrepreneur. He defined an entrepreneur as the “agent who buys means of production at certain prices in order to combine them into a product

\begin{itemize}
  \item \textsuperscript{1} Thiruvalluvar. Thirukkural. Part II: On Wealth. Canto 60: ‘On Energy and Zeal’ (Verse: 591-600); Canto 104: ‘Agriculture’ (Verse: 1031-1040)
  \item \textsuperscript{2} As quoted by Joseph A. Schumpeter. 1965. In Economic Theory and Entrepreneurial History: Explorations in Enterprises. (Ed.) Huge G.J. Aitkin. Cambridge Harvard University Press. pp 45-64.
\end{itemize}
that he is going to sell at prices that are uncertain at the moment at which he commits himself to his worth”. In England during the same period, Industrial Revolution was evolving, with entrepreneurs playing a visible role in risk-taking and transformation of resources.

The 19th century French economist Say\(^1\) expanded the concept of the entrepreneur to include mobilization of the factors of production and the provision of continuing management, in addition to the function of risk-bearing.

Ricardo\(^2\), a contemporary of J.B. Say, treated the industrial manufacturer and an agriculturist synonymously as entrepreneurs. In his words, “the farmer and the manufacture can no more live without profits than the labour without wages. He also stressed that the motive for accumulation of wealth will diminish with every

\(^{1}\) Jean Baptist Say (1803) quoted by Thomas C. Cochran. 1965.

diminution of profit and will cease altogether when profits are so low as not to afford an adequate compensation for the risk and trouble involved.

It was John Stuart Mill\(^1\) who clarified that the entrepreneurial function, the reward for which is profit, has to be different from that of providing capital, the reward for which is interest. This is a major departure from the traditional economic thought fathered by Adam Smith which identified the entrepreneurs as the capitalist, risking his capital for interest and or profit.

Frank Knight\(^2\) looked at the entrepreneur as the manager of uncertainties. If perfect knowledge prevailed, there would be no uncertainty to be borne, but with uncertainties which surround business, the primary function of an entrepreneur is decision-


making. Profit then is the residual share accruing to the entrepreneur for exercising the ultimate responsibility of dealing with uncertainties which cannot be insured nor capitalized, nor salaried.

An entrepreneur is theorized by Schumpeter\(^1\) in terms of a single unique function of ‘innovation’. It is the significance of this function which explains why entrepreneurs are called ‘innovators’. Risk-bearing is not as much an entrepreneurial function as innovation is. When an individual provides capital, risk is assumed in the role of the capitalist and not as an entrepreneur. Schumpeter’s entrepreneurs are those who are innovative in terms of new products, new methods of production, new markets and new forms of organizations.

Kirzner\(^2\) sums up the contributions of the economists


to be a special kind of labour for assuming risk, innovativeness and coordination of factors of production, providing leadership, exercising genuine will, acting as a speculator, an employer, a manager, an information source and being alert to opportunities. And, Long\textsuperscript{1} puts this summation in terms of three major themes of the economic perspective: (1) uncertainty and risk, (2) managerial competence, and (3) creative opportunism.

The Psychological Perspective

Schumpeter's entrepreneur possesses three things\textsuperscript{2}: first, an intuitional capacity to see things in a way which afterwards proves to be true; second, a kind of effort of will and mind to overcome fixed habits of thinking; and third, the capacity to surmount social opposition against doing something new. Such individuals, who


\textsuperscript{2} Joseph A. Schumpeter. The Theory of Economic Development. \textit{op. cit.}, pp. 85-94.
occur randomly in any ethnically homogeneous population are motivated by the dream and the will to found a private kingdom, the will to conquer, and the joy of creating or simply of exercising one’s energy and ingenuity.

McClelland\(^1\) emphasizes the achievement motive which is inculcated through child-rearing practices which stress standards of excellence, maternal warmth, self-reliance training, and low father dominance. However, in a later study, he\(^2\) alters his position and ascribes changes in motivation to the ideological arousal of latent need for achievement among adults typically associated with a new sense of superiority. Thus, the achievement-oriented behaviour may be possible to stimulate through training programmes.

The mechanism of changes in personality formation was the

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most point that would trigger entrepreneurial activity. This was postulated by Hagen\(^1\). He considered that when members of some social group perceive that their purposes and values in life are not respected by groups in the society whom they respect and whose esteem they value high, there occurs a psychological tint called ‘status withdrawal’ and ‘social blockage’. Hagen postulates four types of events which can produce status withdrawal: (1) displacement of a traditional elite group from its previous status by another traditional group by physical force; (2) denigration of valued symbols through some change in the attitude of the superior group; (3) inconsistency of status symbols with a changing distribution of economic power; and (4) non-acceptance of expected status on migration to a new society.

Hagen’s viewpoint is redefined by Shapero\(^2\) and Shapero and


Sokol by shifting the focus of interest from the entrepreneur to 'the entrepreneurial event formation' which extends the scope of 'status withdrawal' and 'social blockage'.

Kunkel developed a behavioural model showing the overtly expressed activities of individuals and their relations to the previously and presently surrounding social structures and physical conditions. The determinants of an individual's activities are to be found largely in the conditioning procedures – both deliberate and accidental – to which he has been subjected in the past, and in the sets of reinforcing and discriminating stimuli which have become part of his behavioural chains and are part of the present social context. The selected elements of societal environment are amenable to change.


The Sociological Perspective

For Weber\(^1\), the driving entrepreneurial energies are generated by the adoption of exogenously supplied religious beliefs. It is these beliefs which produce intensive exertion in occupational pursuits, the systematic ordering of means to ends, and the accumulation of assets.

Cochran\(^2\) emphasizes cultural values, role expectations, and social sanctions. According to him, the entrepreneur represents society’s modal personality. His performance is influenced by three


factors: his own attitudes toward his occupation, the role expectations held by sanctioning groups, and the operational requirements of the job. Society’s values are the most important determinants of the first two factors.

Hoselitz\(^1\) underlines the importance of culturally marginal groups in promoting economic development. He hypothesised that marginal men, because of their ambiguous position from a cultural or social standpoint, are peculiarly suited to make creative adjustments in situations of change and, in the course of this adjustment process, to develop genuine innovations in social behaviour.

Stokes\(^2\), in an explanation of how economically transitional


societies produce industrial entrepreneurs, considers social and cultural values which channel economic action to be important. He sees it as a direct product of the way in which the entrepreneurial role is defined, and comes to be defined, collectivities which are meaningful to the prospective entrepreneur. Why persons with strong needs to achieve should seek to act out these needs in economic activity is a function of cultural values and not of psychological disposition per se. He, therefore suggests that personal and societal opportunity and the presence of the requisite psychological dispositions may be seen as conditions for an individual’s movement into industrial entrepreneurship, but it is the group-generated value matrix that channels him away from or toward such activity.
Section Two

Characteristics of Entrepreneurs

Anchoring on the shores of the theoretical perspectives described above, thoughts on the traits/characteristics of entrepreneurs began to emerge. In this section some of the more prominent contributions in this regard are outlined.

The Western Contributions

The line of distinction between entrepreneurs and the people-in-general was drawn vividly first by McClelland and Winter. They believed that the individual entrepreneur’s need for achievement (n Ach) was the differentiating factor, and to be considered even to the exclusion of other factors.

In the early 1970s other investigations like Hornaday and Bunker and Hornaday and Aboud, while agreeing that n-Ach was


an important psychological factor, found that other traits bore a significant relationship to success. The findings of these investigators and of other research studies have been summarized in a variety of ways. The traits often attributed to the entrepreneur compiled by the East-West Center Technology and Development Institute is shown in the following Table 2.1, shown below.

**TABLE 2.1**

<table>
<thead>
<tr>
<th>Characteristics Often Attributed to the Entrepreneur</th>
<th>Reference Source</th>
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<tbody>
<tr>
<td></td>
<td>SBA</td>
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<tr>
<td>Characteristics</td>
<td>Workshop</td>
</tr>
<tr>
<td>1. Confidence</td>
<td>x</td>
</tr>
<tr>
<td>2. Persevarance, determination</td>
<td>x</td>
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<tr>
<td>3. Energy, diligence</td>
<td>x</td>
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<tr>
<td>4. Resourcefulness</td>
<td>x</td>
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<tr>
<td>5. Ability to take calculated risks</td>
<td>x</td>
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<tr>
<td>6. Dynamism, leadership</td>
<td>x</td>
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<tr>
<td>7. Optimism</td>
<td>x</td>
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<tr>
<td>8. Need to achieve</td>
<td>x</td>
</tr>
<tr>
<td>9. Versatility, knowledge of product, market, machinery, technology</td>
<td>x</td>
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<tr>
<td>10. Creativity</td>
<td>x</td>
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<tr>
<td>11. Ability to influence others</td>
<td>x</td>
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<tr>
<td>12. Ability to get along well with people</td>
<td>x</td>
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<tr>
<td>13. Initiative</td>
<td>x</td>
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<tr>
<td>14. Flexibility</td>
<td>x</td>
</tr>
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<td>Characteristics</td>
<td>Reference Source</td>
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<td>---------------------------------------------------------------------------------</td>
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<tr>
<td></td>
<td>SBA</td>
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<tr>
<td>15. Intelligence</td>
<td>x</td>
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<td>16. Orientation to clear goals</td>
<td></td>
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<td>17. Time-competence, efficiency</td>
<td></td>
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<td>18. Ability to make decisions quickly</td>
<td>x</td>
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<td>19. Positive response to challenges</td>
<td></td>
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<tr>
<td>20. Independence</td>
<td>x</td>
</tr>
<tr>
<td>21. Honesty, integrity</td>
<td>x</td>
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<tr>
<td>22. Maturity, balance</td>
<td>x</td>
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<tr>
<td>23. Responsiveness to suggestions and criticisms</td>
<td>x</td>
</tr>
<tr>
<td>24. Responsibility</td>
<td>x</td>
</tr>
<tr>
<td>25. Foresight</td>
<td>x</td>
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<tr>
<td>26. Accuracy, thoroughness</td>
<td>x</td>
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<tr>
<td>27. Cooperativeness</td>
<td>x</td>
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<tr>
<td>28. Profit-orientation</td>
<td></td>
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<tr>
<td>29. Ability to learn from mistakes</td>
<td>x</td>
</tr>
<tr>
<td>30. Sense of power</td>
<td></td>
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<tr>
<td>31. Pleasant personality</td>
<td>x</td>
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<tr>
<td>32. Egotism</td>
<td>x</td>
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<tr>
<td>33. Courage</td>
<td>x</td>
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<tr>
<td>34. Imagination</td>
<td>x</td>
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<tr>
<td>35. Perceptiveness</td>
<td>x</td>
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<tr>
<td>36. Tolerance for ambiguity</td>
<td>x</td>
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<tr>
<td>37. Aggressiveness</td>
<td></td>
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<tr>
<td>38. Capacity for enjoyment</td>
<td>x</td>
</tr>
<tr>
<td>39. Efficacy</td>
<td>x</td>
</tr>
<tr>
<td>40. Commitment</td>
<td>x</td>
</tr>
<tr>
<td>41. Ability to trust workers</td>
<td>x</td>
</tr>
<tr>
<td>42. Sensitivity to others</td>
<td></td>
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</table>
TABLE 2.1 (Contd.)

Abbreviations & Reference:

**SBA**: Small Business Administration, Washington D.C. U.S. 1964


**IIM**: Indian Institute of Management. Studies 1 and 2.


**INED**: Institute for New Enterprise Development. New Venture Creation by Timmons, Smollen and Dingee. p. 37

The most frequent characteristics in the surveyed studies are shown below in Table 2.2, shown below.

**TABLE 2.2***

Most Frequent Characteristics in Surveyed Studies

<table>
<thead>
<tr>
<th>1. Self-confidence</th>
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<tbody>
<tr>
<td>2. Perseverance, determination</td>
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<tr>
<td>3. Energy, diligence</td>
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<td>4. Resourcefulness</td>
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<tr>
<td>5. Ability to take calculated risks</td>
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<td>7. Creativity</td>
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<tr>
<td>8. Initiative</td>
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<tr>
<td>9. Flexibility</td>
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</tbody>
</table>

*East-west Centre Technology and Development Institute coaled by John A. Hornaday and John Aboud. Characteristics of Successful Entrepreneurs. Personal Psychology. 1971 Vol. 54
TABLE 2.2 (Contd.)

Most Frequent Characteristics in Surveyed Studies

10. Positive response to challenges
11. Independence
12. Foresight
13. Dynamism, leadership
14. Versatility, knowledge of product, market, machinery, technology
15. Ability to get along with people
16. Responsiveness to suggestions and criticism
17. Profit-orientation
18. Perceptiveness
19. Optimism

A further review of literature related to entrepreneurial characteristics revealed the existence of a large number of factors consolidated into a much smaller set of profile dimensions. For example, Garza\(^1\) in his popular article had listed 10 most important characteristics which are shown in Table 2.3. Shown below.

TABLE 2.3

Characteristics of the Entrepreneurs (Garza)

1. Good physical health
2. Superior conceptual abilities
3. The broad thinking of a generalist
4. High self-confidence
5. Strong drive

TABLE 2.3 Characteristics of the Entrepreneurs (Garza) *(Contd.)*

6. Basic need to control and direct
7. Moderate risk taking
8. Great realism
9. Moderate interpersonal skills
10. Sufficient emotional stability

John Kao¹ had identified the following 11 common characteristics:
1. Total commitment, determination and perseverance
2. Drive to achieve and grow
3. Opportunity and goal orientation
4. Taking Initiative and personal responsibility
5. Persistent problem solving
6. Realism and a sense of humour
7. Seeking and using feedback
8. Internal locus of control
9. Calculated risk-taking and risk-seeking
10. Low need for status and power
11. Integrity and reliability.

Stevenson and Gumpert² had presented an outline of the entrepreneurial organisation that reveals such characteristics as imagination, flexibility and willingness to accept risks.


The Indian Thinking

Indian literature in this regard has drawn heavily from the foreign studies and the most prominent among them are the contributors of Bhattacharjee and Akhourī¹ who had identified 24 entrepreneurial traits and Rao² (who, in a survey of the opinion of trainers and from other researchers on entrepreneurs had identified 57 items of entrepreneurial traits).

And, finally, in a summing up exercise, Venkateshwara Rao and Prayag Mehta³ had listed the following 17 traits as pertinent in the Indian scenario: Need for achievement, Need for influencing others, Sense of efficacy, Risk-taking, Openness to feedback and learning from experience, Need for independence, Hope of success,


A belief that they can change the environment, Time orientation and Expectation from employee competition and collaboration, Flexible authority relationship, Need extension, Concern for society, Social consciousness, Dignity of labour and Saving for future.

The above descriptions indicate that the native and foreign categorizations differ only in wordings/labelling of ideas. Content-wise they do agree more than disagree.

In the simplest of practical forms of studying entrepreneurship, it is a function of the entrepreneur \( E = f(c) \), just as defining money as 'what it does'! Thus, a continuous examination of entrepreneurial characteristics would help in the evolving understanding of entrepreneurship\(^1\). The present study is one such effort in the ongoing efforts on understanding agricultural entrepreneurship.

Section Three

Agricultural Entrepreneurship

Entrepreneurship cannot be the exclusive domain of commerce and industry alone (as is normally perceived by many, even today). It is an offshoot of behavioural science. It may, therefore, embrace any human venture, economic or non-economic in nature.

It appears paradoxical to note that, although the French physiocrats of the 18th century (from whom the concept of ‘entrepreneur’ originated) associated ‘entrepreneurship’ with no specific segment of economic activity, the term gradually assumed industrial connotation.

The economic history of many developed nations demonstrate this. With the advent of the scientific era, the developments in science and technology could be readily and rapidly absorbed more by the urban capitalist elite than by the rural masses pursuing agriculture as their occupation for life. The onset
of the Industrial Revolution in Great Britain and rapid industrialization of most of Europe and the US are the manifestation of industrial entrepreneurship. Corollary to this development was the abounding research interest on industrial entrepreneurship, while it was sparse and scanty on rural and agricultural entrepreneurship.

As against this, in developing nations like India, entrepreneurship in industry in general and particularly in agriculture was rather mild and uninspiring. This was because agriculture remained a way of life, governed by tradition and custom than as a business proposition based on necessary economics equations. Even though the Indian farmer, as extolled by Volker\(^1\) on way back in 19\(^{th}\) century, “is quite as good as and in some respects superior to the British farmer”, he lacks necessary capacity, professional strength and adequate protection from the State to emerge as a vigorous entrepreneur. Hence, the proverbial

\(^1\)Dr. Volker in his report on the Improvement of Indian Agriculture. 1889.
saying: ‘India is rich but the Indian farmers are poor’.

But thanks to the Five Year Plan and the Green Revolution\(^1\), the spirit of entrepreneur among the Indian farmers was kindled, though not quite adequately. The extension education to farmers to adopt modernization, state patronage to agriculture in terms of supply of necessity inputs including finance, helped to a greater extent in influencing a sense of entrepreneurism among the farmers. Though very scanty, research studies relating to the entrepreneurial of farmers sprang up, though not in a good measure and wanting in conceptualization.

A brief review of the research literature pertaining to agricultural entrepreneurship is presented below. The studies relate mostly to identifying the characteristics of progressive/successful farmers.

Searching for the factors that help transition of traditional

\(^1\) Green Revolution is the name given to a package of agricultural practices with much emphasis on high yielding varieties of seeds launched upon in India during the mid 1960s.
agriculture to modernism, Epstein\textsuperscript{1} had identified the following characteristics of farm entrepreneurs: (1) high education, (2) contacts with various people (3) innovation, and (4) enterprise in adopting improved practices in farming.

The study by Bhattacharya\textsuperscript{2} on agricultural and industrial entrepreneurship in India and South-East Asian countries observes that the essence of entrepreneurship lies in the shedding of inhibitive value system and in the imbibing of new values relevant to the emerging realities of the environment.

Mosher\textsuperscript{3} made a significant contribution to the thought of agricultural entrepreneurship. He had highlighted the twin roles a farmer should play: that of a cultivator and that of a manager. The


managerial role is most vital in farming, because of its peculiar characteristics, quite distinct from those of commerce and industry.

A study on small farmers by Blanckenburg\(^1\) found that the small farmers do not want to take risk in introducing innovations because of their low level of education and low level of production.

A study on tribal entrepreneurs by Bogaert\(^2\) found that successful tribal entrepreneurship were influenced by education, previous experience and motivation. These factors were more important than the uncontrollable factors such as possession of ancestral land, tribal affiliation, language and religion.

Hundel and Singh's study\(^3\) on the correlates of progressive

\(^1\)Blanckenburg. Possibilities for Decreasing Rural Income Disparities in Densely Populated Developing Countries. Economics. (2) : pp. 52-69


farm behaviour indicated that n-Ach was particularly associated with farm success. Other characteristics linked with success were intelligence, aspiration to advancement in life, need for power, tender-minded temperament and radical outlook. All these factors except need for power were within the wider concept of achievement motivation.

Narayan Prasad Singh\(^1\) undertook a study to ascertain if n-Ach, a critical non-economic variable affecting entrepreneurship, was a dominant factor among agricultural entrepreneurs. It was hypothesized that progressive-successful entrepreneurs might exhibit dominance in n-Ach over (a) traditional and (b) unsuccessful ones. The study found that progressive-successful entrepreneurs possess higher n-Ach than any other group. Further, it was found that n-Ach appeared to be the special feature of a successful agricultural entrepreneur.

Extending the above study, the same author\(^1\) made a study to find whether the influence of n-Ach would differ as between agricultural and business entrepreneurs. The study found sufficient evidence to prove that the mean n-Ach score for business entrepreneurs was higher than for the agricultural entrepreneurs. The superiority of business entrepreneurs in their n-Ach score over their agricultural counterparts was ascribed to two possible reasons: (a) business entrepreneurs are exposed to relatively more economic opportunities than are agricultural entrepreneurs, (b) most of the business entrepreneurs are migrants from rural areas with a strong motivation for progress to justify their displacement. The findings of the study was in conformity with the n-Ach theory of Atkinson\(^2\).

Taking cue from the earlier investigations of Bose\(^3\) and


Chattopadhyay\textsuperscript{1}, Moulik and Lokhande\textsuperscript{2} made a socio-psychological inquiry into the value orientation of farmers and its effects on the adoption practices of farmers. The findings of the study were: (1) the value dimensions of Parochialism–Cosmopolitism and Fatalism–Scientism (values related to modernism or urban values) were significantly, and negatively related with the farmer's level of adoption, indicating that 'the more a farmer is modern with scientific and cosmopolite values, the more likely he is to adopt farm innovations. This was in conformity with the findings of Bose\textsuperscript{3} who concluded that religion and fatalism (the negative extreme of modernism) had negative relationship with farmer's innovativeness. The studies of Ramsey \textit{et al}\textsuperscript{4} and


\textsuperscript{3} Santi Priya Bose, \textit{loc. cit.}

Hobbs also reported the same trend of relationship. (2) On the other hand, the value dimensions of Authoritarianism-Nonauthoritarianism and Familism-Individualism were not significantly related with the farmer’s level of adoption, indicating that the innovativeness of a farmer is not affected by these ‘socially determined values’. This finding is supported by the studies of Wilkening and Fliegel which held that familism and authority have no consistent relationship with adoption of farm practices.

Yet another contribution came from Satvir Singh who


studied the influence of not only n-Ach, but along with it the influence of following other variables: decision-making, orientations, work values and some sociological measures as additional correlates in differentiating fast and slow progressing farmers. The results showed that high scores on attitudes toward earning, preference for activity, pride in work, upward striving, cautious decision making, and interest in maintaining personal relations were associated with progressive farm behaviour. Low scores on these variables were associated with static or declining farm success. The gleaming outcome of this study is that no single theory (such as the n-Ach theory) can explain entrepreneurial behaviour. The fact that n-Achievement is associated with economic development does not rule out the possibility of the other variables being associated with it. The origins of entrepreneurial behaviour are many and varied and remain, what Kilby calls, a heffalump.

The Satvir Singh study stands apart from the pioneering work
of Rogers and Neil\(^1\) and that of their followers like Roy \textit{et al.}\(^2\), Singh\(^3\), and Singh and Gupta\(^4\) who propounded the n-Ach as the most predominant factor for economic development.

Adoption-decision behaviour of big and small farmers was studied by Ganorkar and Bhugul\(^5\). The study found that there was not much deviation among the decision of participation of big and small farmers, in general. Socio-economic status had been a significant factor in the case of big farmers and not significant in the case of small farmers.


Deokar et al\(^1\) made a study to ascertain the association of farm productivity level with psychological characteristics of farmers. The study revealed that farm productivity level of farmers were influenced by their psychological characteristics such as knowledge, attitude, aspirations, incentives, perception, business outlook and planning orientation. Venturesomeness failed to show significant association with productivity group norms built up through extension education may play a overriding role to boost productivity, despite low venturesomeness.

Kalirajan and Shand\(^2\), extending the conceptual thinking of Schumpeter (innovation function), Knight (risk-taking ability) and Schultz (managerial role), proposed a theoretical model for measuring the entrepreneurial abilities of farmers differentiating these from their managerial abilities. The model was tested


empirically with field data from Tamil Nadu. Combination of these two abilities resulted in, what Leibenstein\(^1\) calls, ‘prudent entrepreneurship’.

Pleading that the attributes required by successful farmers, particularly those producing commercial crops, are in many ways similar to those commonly associated with individual entrepreneurs, Anand Singh and Krishna\(^2\) investigated the entrepreneurial behaviour of cotton growers in Andhra Pradesh. The entrepreneurial behaviour was measured in terms of (1) innovativeness, (2) decision-making ability, (3) achievement motivation, (4) knowledge, (5) information seeking, (6) risk-taking ability, (7) ability to coordinate farm activities, (8) use of management services, (9) Leadership ability and (10) Cosmopolitaneness. Results of the study indicate how the lack of entrepreneurial capabilities can


lead an ostensibly successful agricultural activity to tragic failure.

In yet another study on entrepreneurial behaviour of small farmers, Nandapurkar found that those farmers who participated in the various extension programmes and demonstrations exhibited greater entrepreneurial thrust as compared to non-participants. He suggested that entrepreneurial behaviour could be promoted by means of education programmes.

Anjaneya Swamy made a significant contribution to agricultural entrepreneurship by providing valuable insight into the various aspects of entrepreneurial behaviour of migrant farmers.

Deepak De’s study on entrepreneurial characteristics of farmers had found that socio-economic status, education,


knowledge, sources of information utilized, innovative-orientation and progressive values were positively and significantly related with entrepreneurial characteristics of farmers.

The same author made a doctoral study\(^1\) to examine agricultural entrepreneurship through axiomatic approach.

In their study on relationship between size of land holdings and farmers’ achievement orientation, Sinha and Mehta\(^2\) found that farmers with medium size land holdings show greater motivation to achieve, and readiness to change, when compared with small and bigger land owners; and the younger ones are better disposed to achieve and change, irrespective of the size of their land holdings.


The earliest study among the items reviewed relating to innovation-adoption behaviour of farmers was by Satadal Dasgupta\(^1\). The farmers were categorized as innovators, early adopters and average farmers (laggards). They differed significantly in respect of socio-economic status, education, outside contact, land ownership and land tenure. The innovators scored high in all these variables. Social leaders, educated farmers and people with more outside contacts lead in farming operations.

The study by Brahmachari Mohan Kumar\(^2\) on innovation and adoption behaviour of farmers in two panchayats of Bihar State has made a significant contribution to the extant knowledge in this regard. The important finding of the study are: Age was found effecting adoption, thus confirming the popular notion of younger one being conducive to adoption. But caste was not associated.

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Education was associated but not with statistical significance. Nor type of family, but size was found associated with adoption. Earning members and subsidiary occupation were not in anyway related with adoption. Size of land holdings was also not associated with high adoption level. In socio-psychological realm, educational occupational and political aspirations were not associated with adoption significantly. Conservative value-orientation was not found correlated with adoption, but liberal and progressive ones were.

Conclusion

The review of literature presented above is only a humble attempt to outline the broad ideas relevant to this study. There are several other studies which deserve inclusion here. To avoid redundancy, they were excluded; some were not accessible to the researcher. The reviewed material gave the needed strength to venture this research effort.