CHAPTER II

ENTREPRENEURSHIP AND INNOVATION

This chapter examines the concepts of entrepreneurship and the diffusion of innovations. Here, the theoretical and empirical studies on the economic, social and psychological factors behind the development of innovative industrial entrepreneurship and the classification of the adopters of innovations on the basis of the time of adoption are briefly described.

Theory of Entrepreneurial Supply

The term 'entrepreneur' has many definitions associated with the functions of uncertainty bearing, coordination of productive resources, the introduction of innovations and the provision of capital. But as this study is on modernization of the leather industry the innovation function would be the most important. According to Schumpeter a person is an entrepreneur "only when he actually carries out new combinations" and not when he does the routine job of managing a static enterprise.† The new combinations would cover the

introduction of new goods and new qualities and of new methods of production, the opening of new markets, the conquest of new sources of supply of raw materials and semi-manufactured goods and the carrying out of a new organization of an industry like trustification.¹

The presence of innovating entrepreneurship is so crucial to the modernization and development of industries that the entrepreneur has been the focus of attention of a long tradition of multi-disciplinary research particularly with respect to the characteristics that distinguish the innovating entrepreneur from others. A few economists analysing economic development have, however, assumed that individuals with the necessary entrepreneurial skill and motivation exist in society and given a hospitable economic environment they develop and modernize productive activities, and these economists have dealt most often with variables like productive resources, market conditions and technological change as factors of economic development.² But other economic historians, sociologists, psychologists and anthropologists have considered the supply of entrepreneurship

¹ *ibid.* p.66

as the more important variable and the most serious problem in the development of backward economies. According to them entrepreneurship is not randomly distributed in all places and social groups, and only particular individuals who possess certain attributes are more likely to perform innovative activities. These attributes may be objective and social like occupational or class origins, or subjective and social psychological like personality, motivation, attitudes and values.

The objective and social factors have been stressed in many 'country' studies of entrepreneurship over the last thirty years. Some of these have concluded that certain occupational groups provide proportionately more of industrial entrepreneurs than others. The mercantile and/or crafts backgrounds have been found to be proportionately more common among industrial entrepreneurs in Pakistan,\(^1\) Turkey,\(^2\) Greece,\(^3\)


Philippines\(^1\), Lebanon\(^2\), and Nigeria\(^3\). Other researchers have documented the existence of entrepreneurial talents in high status groups and elites in Indonesia\(^4\), and El Salvador\(^5\).

Another tradition in the literature on entrepreneurship emphasizes the subjective element, namely, the social psychological processes in the determination of entrepreneurial innovation. The earliest examples of this point of view are the works of Max Weber\(^6\) and J.A. Schumpeter\(^7\). Weber focuses


on the influence of religious belief on one's practical life. The religious emphasis on hard work and austerity as in the Protestant ethic leads to growth of capital for industrial development. For Schumpeter, entrepreneurship is the expression of certain personality characteristics that are independent of any belief system. He stressed on the entrepreneur's psychological motives like his dream and the will to found a private kingdom or even a dynasty, his will to conquer and to prove himself superior to others and to succeed for the sake of success itself, and of his joy of creating, of getting things done and of exercising his energy and ingenuity.¹ Large businesses are better than smaller businesses for introducing innovations, though setting up a large business requires special aptitudes. But once the entrepreneur sets it up, he has also triumphed for others, blazed a trail and created a model for them to copy, and they can and will follow him, first individuals and then whole crowds (which Mansfield calls as bandwagon or contagion effect).²

The more recent works of Harvard psychologist


McClelland\textsuperscript{1} and economist Hagen\textsuperscript{2} provide further support for the view that subjective attributes of individuals determine their entry into and their quality of entrepreneurship. McClelland identifies a motivation called 'need for achievement' (\textit{n ach}) and links it with entrepreneurship. People with high \textit{n ach} are motivated by a concern to do well not so much to earn money or recognition but for their own satisfaction. They prefer situations where they should assume personal responsibility for solving problems, and so individuals with high \textit{n ach} become entrepreneurs so that they can satisfy their achievement need. McClelland felt that a part of one's \textit{n ach} was on account of parental and environmental influences in early childhood but believed that achievement motivation can also be increased by proper training. McClelland was personally responsible for starting achievement motivation training programmes in many countries including India.

Hagen though an economist looked at entrepreneurial supply as a social psychological phenomenon. He felt that withdrawal of status respect in traditional families caused


a change in child rearing practices that led to the emergence of creative and innovative personalities. It is not however necessary that an entrepreneur who innovates be modern in every respect. Where a considerable degree of creativity is inculcated, but the anxiety is great, a variant type of individual may also appear, one who gives himself security by being traditional and authoritarian in most aspects of his behaviour and then dares to be bold and creative in some other aspects, like Henry Ford and Pierpont Morgan, and Hagen considers that this type of entrepreneurship has been important in Japan, Russia and Germany.¹ Hagen had also emphasized the importance of disadvantaged minority groups in supplying business leadership in times of economic growth and change for which he gives the examples of the dissenters in England, the Protestants of France, the Samurai of Japan, the Jews in many countries and the Parsis of India². He argues that men in these groups felt discriminated against and so compensated for it in the best and often the only way open to them by succeeding in business. McClelland would


accept the above thesis with the proviso that the minority group has predominantly middle class status and possesses reasonably high *n* *ach*.

Hoselitz and Gerschenkron believed that culturally marginal individuals make good business leaders. According to Hoselitz economic change is triggered by social deviance by ethnically, linguistically or other culturally marginal individuals aided by favourable natural resources, technological development and government policy.

Leibenstein felt that innovating entrepreneurs came from groups looked upon as outsiders (but within the extended family). Their opportunity costs as such entrepreneurs are likely to be lower than those of the people already in the concerned business and hence the outsiders are more innovative. Hirschmier and Yui studying Japanese businessmen have concluded that private entrepreneurship in the early Meiji

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period was spearheaded by new men motivated by both economic and political, and ideological goals, like the belief in the future of the Meiji Restoration.  

The theory that new men are likely to be more innovative than traditional entrepreneurs has been supported by Marshall, Schumpeter and Erickson.

These theories have had such an impact on researchers that there have been numerous studies of correlation between a variety of variables including those like religious orthodoxy, birth order, death of father early in the life of the entrepreneur, poverty of the entrepreneur in his


7 ibid
youth and the association of a rich benefactor\(^1\) (the Horatio Alger type rag to riches phenomenon), father-in-law's social class\(^2\), and early childhood training of the entrepreneur on the one hand, and the leadership and innovativeness of the entrepreneur on the other.

However, a rational view would be to consider both economic and political factors and social psychological factors to be equally responsible for industrial modernization, for the highest motivated entrepreneurs can achieve little if government policy poses a barrier to modernization, and the most opportune economic environment may not lead to industrial modernization in the absence of motivated entrepreneurs. As Rostow feels, a special kind of mixed economic, social, political and perhaps even biographical analysis would be required to explain the response in a particular industry to the potentialities presented by the flow (and pool) of possible innovations\(^3\).


\(^2\)Erickson, op. cit. p.45

Among the studies of industrial entrepreneurs in India are those of McCrory, Berna, Hazlehurst and Nafziger. McCrory made a study of small scale industry in a North Indian town and found that the industrial entrepreneurs there who had a mercantile background took a 'short-term' approach to industry, regarded the production process as something fixed and static, were unwilling to tie up more than an absolute minimum of capital in plant and machinery and remained preoccupied with trade and quick turnover as the sole source of profit. In contrast with the entrepreneurs with a mercantile background, those with a craftsman's background "had all the qualities of good entrepreneurs" (except success). They lived frugally and saved. They were highly skilled themselves or employed skilled personnel. They were quality conscious. They were quick to learn and they improved techniques on their own. They were resourceful and if they would not buy machines they built their own.

Berna investigated the background of the entrepreneurs in Madras State, particularly from the light engineering industry in and around Madras and Coimbatore cities, the ways

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in which they had made the transition to industry, and the problems they had faced in establishing and building up their enterprises. He also evaluated their performance as industrial entrepreneurs. He found the entrepreneurs in his sample come from varied economic and social backgrounds, men of trading background and trained engineers taking the two largest shares. He found a high degree of freedom of entry to industry in the State and sociological factors like caste, attachment to traditional activities, and approval or disapproval of the entrepreneur's social group were less important than economic factors such as access to capital and possession of business experience and technical knowledge in the matter of entry into business. The entrepreneurs were eager to expand operations and develop their firms into larger units. They had a growing interest in technological improvement. Many of them had been active in diversifying production and in shifting to new lines of activity. Graduate engineers among the entrepreneurs had been the most enterprising and capable industrialists.¹

While Hazlehurst made a study of the businessmen of the Aggarwal, Jain, and Sud Castes in a town northwest

of Delhi\textsuperscript{1}, Nafziger studied small industrialists in Visakhapatnam in Andhra State\textsuperscript{2}. The latter found a highly disproportionate number of entrepreneurs (especially successful ones) are from twice-born castes and from families with a high economic status.

Regarding the other studies of Indian entrepreneurs there have been quite a few on individual large entrepreneurs like J.N.Tata\textsuperscript{3} or on caste groups like the Parsees\textsuperscript{4} or of samples of small scale industrialists in certain towns or


regions¹ or generally on the Indian business community². But there seems to be no published study of entrepreneurs in a single industry particularly with respect to its modernization. Published studies of modernization by entrepreneurs relate only to farmers and sellers of agricultural inputs³.

Considering all the studies of individuals and groups of entrepreneurs enumerated above, one cannot but agree with Kilby⁴ that the subject of entrepreneurship like the mythical


Heffalump is being sighted by more and more people who have varied descriptions about it sometimes contradicting one another but it is still to be captured. There is no consensus about the skills and abilities necessary for entrepreneurship, about the origins of the entrepreneurial class or about how to increase the supply of entrepreneurship. With all humility the researcher would say that he has been one more to join the Hunt of the Heffalump.

Entrepreneurship, Innovation and Modernization

Modernization of industry can be defined in the context of this study basically as "the transformation from the production of semi-finished leather into the production of fully finished leathers and leather goods". As this implies the introduction of new processes involving the use of chemicals, machinery, qualified technicians and new skills in tanning it would amount to "carrying out new combinations" and "production of new goods and new qualities and new methods of production" which in the Schumpeterian sense would come under the term 'innovation'\(^1\) which can generally be defined

\(^1\)Some writers would use the term meta-innovation here as the processes have already been evolved in other countries and only introduced in India in an imitative way, for example Wayne G. Broehl (Jr). 1978. The Village Entrepreneur. Cambridge, Mass. Harvard University Press.
as the adoption of new ideas and practices. While those who are the earliest to adopt new ideas are the innovators, others who follow them would be the imitators. Thus the tanners who modernize their units can be termed as innovating or imitative entrepreneurs, and a tanner's propensity to modernize would correspond to his innovativeness or propensity to innovate. Innovativeness can be defined as "the degree to which an individual adopts new ideas relatively earlier than others in his social system", and is thus a time-based concept.

Thus innovation is the key element in the entrepreneurship that is critically important for the developing economies, and modernization of industry is one manifestation of entrepreneurial innovation.

Categorization of Adopters

As the present study relates to the pace of modernization of the leather industry by tanner entrepreneurs, it is relevant here to recount the main concepts in the sociological study of modernization. Sociologists have been studying innovation whether it be at home, in the farm or in the factory as a social phenomenon of modernization. An innovation has to be put into practice by a number of individuals in order to modernize the society concerned. This
putting into practice an innovation is called adoption, and
the spread of the innovation is called diffusion. The pass-
ing of the knowledge of the innovation from person to person
is called communication. The person who influences a person
to adopt an innovation is called change agent.

Some of these studies of modernization have tried to
isolate the characteristics that differentiate the innovators
from the others or differentiate the early adopters from the
later adopters. For this purpose the adopters of innovations
have to be classified into different categories.

Research on modernization has generally shown that the
adoption of an innovation follows a normal bell-shaped curve
plotted over time on a frequency basis and the cumulative
number of adopters plotted with respect to time appears as
an S-shaped curve. The normality of the adopter distribu-
tion is explained either by the psychological learning curve
or the binomial expansion assuming each adopter speaking
about it with two other persons. After the first person
adopts an innovation and learns how to solve the setbacks
involved, more and more persons adopt it during every time
period with the passage of time till a certain stage when
persons relatively more interested in it have all adopted
it and thereafter the number adopting the innovation in
each time period slackens. Therefore, Rogers suggests a procedure to classify adopters of innovations into different categories on the basis of two parameters of the normal curve, the mean and the standard deviation. According to this procedure which is widely used in diffusion studies, these parameters are used to divide adopters into (1) innovators, those who adopt the innovation earliest, that is before $\bar{x} - 2\sigma$ years, where $\bar{x}$ is the mean of the years of adoption and $\sigma$ is their standard deviation; (2) early adopters, those who adopt the innovation between $\bar{x} - 2\sigma$ and $\bar{x} - \sigma$ years; (3) early majority, those who adopt between $\bar{x} - \sigma$ and $\bar{x}$ years; (4) late majority, those adopting the innovations between $\bar{x}$ and $\bar{x} + \sigma$ years; and (5) laggards, those who do not adopt the innovation even by $\bar{x} + \sigma$ years, as shown by the following diagram.

![Diagram showing the distribution of adopters over time](image)

**Figure 2.1. Adopter Categorization on the Basis of Innovativeness**

The most innovative persons called above as innovators have also been termed by social researchers studying modernization as progressists, high-tryers, experimentalists, light-houses, advance scouts and ultradopters. The laggards, the least innovative have been variedly called as drones, parochials and diehards. The middle groups between innovators and laggards are sometimes collectively called imitators.

A particularly fascinating study of adoption of innovations was a study by Rogers and his team. Studying the farmers of Colombia they found the earlier adopters were usually younger in age, higher in social status, financially in a more favourable position, and involved in more specialized operations. They utilized more of mass media channels of communication and were more cosmopolite in nature than the later adopters. They were also accorded higher opinion leadership in modern communities. But in traditional villages the innovators were accorded little opinion leadership and were perceived as deviants by their peers\(^1\).

Conclusion

In the Schumpeterian sense, the entrepreneur is an innovator, 'one who tries out new combinations'. With

Reference to industrial growth in underdeveloped economies the innovative as well as the imitative entrepreneurs are important. Theoretically, the innovativeness of entrepreneurs will depend on intrinsic factors either objective like occupational and class origin or subjective factors like personality, motivation, attitudes and values, in addition to external factors like a hospitable economic environment which encourages entrepreneurial innovation. In this regard, the theoretical contributions of writers like Schumpeter, Weber, McClelland, Hagen, Hoselitz, Gerschenkron and Leibenstein as well as the important empirical studies of entrepreneurs in India and abroad were briefly reviewed in this Chapter. Also, as modernization of industry can be considered as an example of the overall phenomenon of social modernization, the Rogers' scheme of categorization of adopters of innovation was also briefly described here as the basis on which the tanners in the sample have been classified with respect to industrial modernization for the study.