CHAPTER-III
RESEARCH METHODOLOGY

The woman entrepreneur establishment is identified with an individual who has ownership interest and exercises decision-making power and performs entrepreneurial function of risk taking. Risk is associated with the variability of future returns of an enterprise. Risk taking and entrepreneurial capability are interlinked and varies according to location and enterprise. Thus, the performance of the enterprises run by women vary according to the risk taking ability of an entrepreneur:

An evaluation of entrepreneurship among women considers the three major aspects, namely, willingness to take risks, measurement of indicators and performance evaluation. Entrepreneurial capability is measured in terms of investment, sales, profit and productivity.

An attempt is made to evaluate the performance of enterprises run by women as to the degree of entrepreneurship. The main factors that contribute to the variability of returns of a particular investment among others are:
1. New Technology
2. New Product
3. New Market
4. New Capital
5. New Labour

THE DEGREE/LEVELS OF PERFORMANCE OF FACTORS AFFECTING RISK TAKING BEHAVIOR

The factors affecting risk-taking behaviour will have different levels of influence.
Their degree/level of influence can be captured as follows

A. **New technology refers to the degree of automation of each operation.**
   - L₁ - No automation, work is done with utmost manual aids
   - L₂ - Work is automated and controlled manually, or partial automation
   - L₃ - Work is automated, feedback is automated and controlled manually, or full automation

B. **New product refers to the nature of the products or services produced by the entrepreneurs.**
   - L₁ - Imitation
   - L₂ - Significantly different
   - L₃ - Innovation

C. **New market demand refers to the demand for the product or service and usefulness in the area.**
   - L₁ - Sale of current products in the current market, or low demand
   - L₂ - Sale of current products in the new market, or substantial demand
   - L₃ - Sale of new products in the market a new products for new markets, or high demand

D. **New capital refers to the amount of capital invested in an enterprise**
   - L₁ - Investment less than Rs 1 lakh
   - L₂ - Investment between Rs 1 - 2 lakhs
   - L₃ - Investment more than Rs 2 lakhs

E. **Labour refers to the degree of skilled and managerial labour used in each operation**
   - L₁ - Manually related, or unskilled
   - L₂ - Partly technically related and partly manual, or semiskilled
   - L₃ - Technically related, or skilled including technical and managerial labour
By way of criteria rating matrix, the above factors are evaluated as high, medium and low entrepreneurial performance of women enterprises in the industry, service, business sectors both in urban and rural areas and compared with performance indicators. There could be many other criteria but the decisive ones considered are technology, nature of the product, marketing, capital and labour. These criteria have been given rankings depending upon the nature of performance and the weighted rank average indicates the degree of entrepreneurship in different categories. These criteria are given numbers as 1, 2 and 3 to indicate the level and intensity of the particular criterion’s ranking. Level 3 (L3) means high performance, Level 2 (L2) means medium performance and Level 1 (L1) means low performance in the respective aspect.

PERFORMANCE EVALUATION

Performance of the enterprise is evaluated in terms of profitability and productivity ratios. Profitability ratios are of two types. They are profitability in relation to investment and profitability in relation to sales. Together these ratios classify, measure and assess the performance of an enterprise and help in planning and forecasting. They reveal different things about the performance and even the strategy of the business.

These criteria when compared to performance level indicate the nature of entrepreneurship in the Industry, Service and Business (ISB) sectors in rural and urban areas and the scaling is done according to the degree of control exercised by women entrepreneurs.

Risk taking in industry is different from service and business sectors both in respect of locations and enterprises. High risk taking leads to more effective performance because the entrepreneur makes rapid decisions.
RATE OF RETURN ON INVESTMENT

Profitability ratios relating to the profits of a firm to its investment are termed as rate of return on investment. It provides the starting point for an analysis of business performance and an overall yardstick with which to compare absolute performance. This ratio shows the earning power of investment. The formula used is:

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\text{Rate of Return} = \frac{\text{Profit after tax}}{\text{Total fixed investment}}
\]

PROFIT RATIO

This ratio indicates the net margin earned on sales. The profit margin measures the relationship between profit and sales. Profitability in relation to sales indicates the efficiency of operations as well as how products are priced. The ratio is based on the premise that a firm should earn sufficient profit on each rupee of sales. The return on sales shows how well the enterprise is doing in maximizing sales and minimizing costs. The ratio of profit after tax on sales expresses the cost price effectiveness of the operation. The formula used is:

\[
\text{Profit Ratio} = \frac{\text{Profit after tax}}{\text{Total sales}}
\]

PRODUCTIVITY RATIOS

Productivity ratios measure how efficiently an enterprise is using its workforce and capital employed. They are labour productivity and capital productivity. Both labour and capital productivity ratios refer to standardized units. The standardization of manpower has been accomplished by linking different salaries and wage income in the same group, such as temporary or permanent, skilled or technical as a standardized unit based on their relative weight for the sake of
accounting convenience Likewise, different types of capital and capital investment have been standardized based on their relative weightage and value. Total number of employees have been standardized based on wages received and their share in total employment. The ratios used are as follows:

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\text{Labour Productivity} = \frac{\text{Total Production}}{\text{Standard number of employees}}
\]

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\text{Capital productivity} = \frac{\text{Total Production}}{\text{Standard fixed investment}}
\]

The ratio analysis presents facts on a comparative basis and enables in drawing inferences regarding the performance of enterprise in terms of operating efficiency, overall profitability and trend analysis.

**EVALUATION OF ENTREPRENEURSHIP WITH RISK ANALYSIS**

Risk taking willingness denotes the ability of taking up challenge in a given situation where a person not satisfied with the present outcome strives for some additional pay off. The behavior of an entrepreneur is guided by her own subjective estimate of the degree of risk involved in the ventures. Two persons may view the same venture as involving different amount of risk. If both of them go in for the same venture, it means that the person perceiving greater amount of risk in the venture has the higher risk taking willingness than the other person. Business growth and development require that entrepreneurs are willing to assume risk. However, all phases of work involve risk taking which is an essential part of being an entrepreneur. Considering the risk women entrepreneurs encounter, risk situations are classified as high risk, medium risk and low risk. Risk taking, innovating entrepreneurial
women are required when the business situation requires growth strategy

Risk analysis is one of the modern approaches to decision making under uncertainty. Uncertainty is attached to every investment project and different investment projects have varying degrees of risk. To take risk is the essence of economic activity. The existing means of production will yield greater economic performance only through greater uncertainty and it is essential that the risk taken be the right risk. The end result of successful strategic planning must be the capacity to take greater risk, for this is the only way to improve entrepreneurial performance. To extend this capacity, however, the entrepreneur needs to understand the risks he takes and be able to choose rationally among risk taking courses of action.

Risk analyses assess the yield of an investment, which will help to optimise their decisions with a view to improving performance and providing for long term growth. The first step in risk analysis is to uncover the major factors that contribute to the risk of the management. The decision is ultimately based on the entrepreneur's subjective evaluation of risk. Within a business enterprise, entrepreneurs going in for something new are high-risk takers. Medium risk takers are those entrepreneurs going in for moderate improvement in the venture, and low risk takers are those entrepreneurs who are continuing in the existing line of activity.

An attempt is made to take account of the whole range of the effect of the risky factors on the decision-making. Profit is the premium for the risk of uncertainty. The higher the degree of risk of a particular enterprise, higher will be the rate of return on investment and the profit rate. Higher the degree of risk undertaken higher is the labour and
capital productivities resulting in higher volume of production and hence sales at lower cost and higher profit. This creates more employment opportunities. The lower the degree of risk of a particular enterprise, lower is the rate of return on investment, profit rate, labour and capital productivities, while medium degree of risk yields moderate rate of return and profit rate and moderate rise in labour and capital productivities.

While the levels of selected variables and meaningful ratios among them constitute one set of measures of entrepreneurial performance, rate of change in these variables agewise and investmentwise is considered to reflect trends in effectiveness of entrepreneurial decision making and thus to set another set of performance indicators. A whole gamut of entrepreneurial decisions is reflected in the achieved rate of change in economic variables. This is achieved by comparing start period values with current values. Decision to achieve better capacity utilisation, to effect economies in the operation of the enterprise in various direction and to commit funds in addition to fixed capital, to adopt measures for improving the efficiency of labour and for ensuring cordial relations between management and labour and so on, are all factors that impinge upon the rates of change in the economic indicators. Based on measures on entrepreneurial efficiency, it is possible to undertake comparison of entrepreneurial behavior in respect of the effectiveness of their decision-making.

Throughout, the ratio analysis method will be used in performance evaluation. Based on the nature of risk taking and nature of performance of women entrepreneurs, it is possible to relate different risk ratios to performance ratios.
TECHNIQUE OF ANALYSIS

The analysis is being attempted through ratio and risk analyses. The function of these techniques is to assist in the process of decision-making. Ratio analysis is defined as the systematic use of ratio to interpret the financial statements so that the strengths and weaknesses of a firm as well as its historical performance and current financial condition can be determined. The ratio refers to the quantitative relationship between two variables. It is used to obtain better understanding of the firm's position and performance. Risk analysis is one of the modern approaches to decision making. It attempts to develop for every critical variable in a decision problem a degree of probability.

In order to diversify risk, i.e., maximum return for a given level of risk or to minimise risk for a given level of return, the relation between returns on different indicators is significant. Establishing relation between risk taking and performance will indicate the entrepreneurial capability of women who run the different enterprises when performance and risk taking behaviour are related. Where high risk taking results in high performance the entrepreneurial capability shows a high level. Where there is moderate risk taking the performance is moderate and where there is low risk taking the performance is low, so also their entrepreneurial capability. It may be that where risk adversity is involved it may mean either agewise or investmentwise factors have less relationship with performance. Otherwise, greater the investment or higher the age, greater will be the element of risk taking. From the above, it may be possible to assess the growth and significance of entrepreneurship as well as risk taking in enterprises, in regions and in different sectors according to various age and investment groups.
OBJECTIVES OF THE STUDY
1. To evaluate risk-taking behaviour through scaling technique
2. To disaggregate risk-taking behaviour into different segmentation with different performance
3. To evaluate performance of sales, profit, investment capacity, labour and capital productivities through scaling technique with different performance
4. To relate risk taking behaviour with performance decisions and to evaluate whether there is any relationship between high risk taking and high level of performance and so on
5. To investigate the factors responsible for deviations
6. To suggest entrepreneurship development initiatives in different situations

HYPOTHESES
Some of the hypotheses to be tested are
1. As the age of the unit increases, its risk taking capacity increases
2. As the size of investment increases, the intensity of risk taking also increases
3. The nature of risk taking in the urban area is at a higher level than in the rural area
4. Any combination of the three when not related to high risk taking is due to the absence of one or the other

SAMPLE DESIGN
Given a regional profile that features a concentration of small industrial, service and business units, and the fact that the Mangalore industrial area shares far more than 60 percent of the total units in the region, the sample from Mangalore has been given maximum representation. With regard to rural units, other taluks including Mangalore have been selected. Since the performance of the Prime...
Minister’s Rozgar Yojana has been more satisfactory than other programmes, 75 percent of this sample belongs to this category. From the list available with the District Industrial Centre on Women beneficiaries, 50 percent of all the running units have been selected taking into account all products, investments, age groups and location.

Dakshina Kannada is an emerging industrial area where the number of service entrepreneurs has been burgeoning. Various business communities and women’s groups encourage women to establish small-scale units. The emergence of women entrepreneurs has been further reinforced by the fact that the proportion of female headed households in the region is very high, and further, many households have their male heads working outside the region. In addition, the proportion of women getting assistance from government employment programmes is also high. Moreover, the educational standards and the risk taking behaviour of women, are higher in this region compared to outside the region. Therefore, the selection of this region for the evaluation of the performance of different employment programmes and women beneficiaries is justified.

Being the representative of small-scale enterprises this district has been chosen for the study. The analysis is attempted for the year 1993-94 to 1999-2000. A sample of 200 women entrepreneurs spread over 5 taluks was interviewed by means of a schedule. The field study was undertaken from October 2000 to January 2001. In the schedule, personal information such as age, education, training, experience, family occupational background, income of the household, motivation, behind the venture, choice of activity and location account for the introductory part. Particulars about project proposal/selection, project cost, sources of fund, loan component, amount of loan sanctioned and disbursed for running of the units were considered in the second part.
The third section includes production in the base and current period, where the growth in investment, sales turnover, profits and fixed assets and also the expansion and diversification of unit/enterprise, if any, are taken into consideration. Technology adoption, changes in employment and income levels, total working expenses and the net income earned and change in life style formed the fourth section. The linkage problems, raw material problems/availability of raw material and nature of marketing formed the next section.

Entrepreneurial motivation and nature of risk taking, reason for selecting the problems encountered by women entrepreneurs and performance evaluation formed the last section. The general particulars cover particular of inspection, opinion about officials, overcoming of problems, level of satisfaction, adequacy of loan and suggestion for improvement of the venture.

Industry ventures numbering 40 were grouped into 9 major categories such as food and beverage industry, furniture, ready-made garments, metal works, chemical industry, stationary manufacture, desktop printing, flour mill and others.

The service establishments numbering 105 were grouped into 7 major categories like electrical servicing and hiring, watch and radio repair, beauty clinic, xerox and STD, tailoring, fashion designers and catering.

Business establishments numbering 55 were grouped into major categories like fancy stores, general stores, textile shops, stationary shops, milk parlours/hotels and others.

**SAMPLE AREA**

Dakshina Kannada district consisting of 5 taluks is a developed region in Karnataka State. It has a large proportion of land under plantation crops. The district enjoys the distinction of being the first...
totally literate district in the State. It also excels in the fields of transport and communication. A sound banking system, a large number of medium and large scale industries and a host of pipeline projects have pushed the district into third place amongst the 42 districts identified by the Central Government as the most conducive districts for industrialisation after the liberalisation of Indian economy. This is mostly due to the availability of manpower and well-developed Port, network of roads and railways leading to other parts of the country.

Large-scale employment of the district is found in tiles, beedi and cashewnut processing units. The district is a well-endowed heavy rainfall coastal region with high population density and social development. Owing to the literacy drive in the district and also the thirst for finding placement in overseas and in large scale companies, the requirement in the agricultural sector in the form of unskilled labour has increased in a democratic way in the recent years.

Though agriculturally developed, industrially this region has since long remained backward. The region is concentrated with small-scale industries especially in the household sector. There are a growing number of medium sized factories and many small-scale factories. Besides, there are many unregistered tiny units mainly in the tiny sector. Mangalore taluk accounts for over 50 percent of total investment in the small-scale industry sector and in employment generation. The District Industries Centre has been instrumental in the supply of scarce raw materials especially those of local specific, establishment of industrial sheds, provision of loans through financial institutions, provision of subsidies and incentives, training of entrepreneurs, rehabilitation of sick units and many other development programmes. The Yeyyady Industrial Estate and the Baikampady industrial complexes in Mangalore have achieved great strides in industrial diversification and development.