Chapter 4
Research Aims and Methodology

Introduction

The previous chapters have covered in depth the floriculture industry and literature review. This chapter of the thesis presents the research methodology that was used to conduct the research in order to answer the research questions and thereby fulfill the purpose of this thesis. First, the research approach and the research strategy are outlined. Then, a presentation of how the data collection was carried out and how the sampling was selected follows. Finally it explains the choice of general analytical strategy, and ends up with an assessment of the quality standards of the research. Thus this chapter gives a detailed description of the aims of research, research methodology, research design, hypotheses and analysis of data.

4.0 Research Aims and objectives

The literature review in previous chapter has presented the theoretical framework for this research. From the review it is evident that there is a major gap in literature pertaining to the floriculture sector particularly India. There are very few studies and surveys related study of floriculture sector in developing countries. Baring a couple of studies there is no research conducted to apply and test porters five force model to this sector. Moreover there is no study to apply this to the floriculture firms in India. Previous research have focussed on using single framework or theories and use of multiple frameworks and theories is rare. Also from the review it can be concluded that internationalisation sustainability is not a major theme in these researches.

Major shifts in world economy, society and technology will cause dramatic changes in horticulture. The horticulture industry will change from a production-driven to a customer-driven strategy while developing market-oriented product chains. Horticulture research must focus on plant production, it will include many more disciplines and multi-disciplinary collaboration in agreement to the information flow in product chains. H.J. van Oosten 1998
In order to address the broader issues of sustainability of agro-industrial systems, various types of sustainability need to be highlighted and current sustainability frameworks must be evaluated. The sustainability of the floriculture firms needs to be evaluated to determine the usefulness of the methodology as a tool for industry stakeholders to better understand (and therefore implement) holistic sustainability strategies.

In an increasingly interdependent global economy, the capacity of a country’s business sector to export competitive products to the international market on a sustainable basis has become one of the major determinants of economic growth. (Jiang, 2001). The theoretical approaches show several ways to measure the performance of an industry. Sustainability is not a keyword in any of these theories. Some are focused on the understanding of the conduct and performance, others on how to attain a better performance in the future. The value of a theory depends on the problem definition. The approaches in the overview seem to be sufficient to deal with question related to the economic position of an industry in a global supply chain. The competitiveness of industry can be analyzed, as can the strategic management of an individual firm or the benefits of cooperation between firms in the chain. The theories are able to give the conditions for economic sustainability in the long run.

“To achieve competitive success, firms from the nation must possess a competitive advantage in the form of either lower costs or differentiated products that command premium prices”. (Porter, M, 1994) India posses the competitive advantage in the form of lower labor costs.

The worldwide floriculture sector is competitive. Barriers to both entering and exiting the sector are low. The costs of switching between suppliers or buyers and between flower varieties are also low. The flower production in most developing countries is destined for developed countries: the domestic market in developing countries is negligible. The sustainability of the industry is therefore determined by the competitive advantages and the strategic behavior. Porter’s approach is well suited to analyze the competitive advantages. It is very clear that an industry will be excluded from international chains if the capabilities in the supply bases are insufficient to meet the international demand standards – which include a competitive price. Theories on how to derive a strategic scope and how to derive a strategic advantage are also available. Cooperation and customer-oriented support seems to be more
beneficial, as is a chain governed by foreign buyers or investment. However, the question is: will any competitive advantage be sustainable?

Product and production characteristics distinguish flower and fresh food chains from industrial products chains as well as from non-perishable agricultural chains. Managing these chains is complex because of the characteristics of the product. Perishability, variability in price, quantity and quality, seasonality, bulkiness and geographic specialization all complicate the efficient organization of perishable supply chains. Wijnands, 2005

Horticulture, is an especially technological and vertically integrated form of agriculture with a heavy dependence on the input of private agribusiness and trade organizations who play an essential role in providing technological inputs (e.g., cultivars, pest and disease control, post-harvest management, etc.) establishing standards and marketing of produce. Brown, 2004

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Moreover there is no study to apply this to the floriculture firms in India. Previous research have focussed on using single framework or theories and use of multiple frameworks and theories is rare. Also from the review it can be concluded that internationalization and sustainability is not a major theme in these researches. Fig 4.1 shows the research design used for this research.
RESEARCH DESIGN

Desk research on Indian Floriculture Industry and Literature review on Internationalization & Competitive Strategies Pestle analysis and Swot analysis

Construction of Conceptual framework

Macro environment: PEST Analysis: analyzing the relationship between the firm and its macro environment.

Micro environment: Porter’s five-force framework: for understanding the industry and the sectors as the source of Competition

Integrate external and internal analysis

SWOT is introduced for examining the opportunities and threats to each firm through its strength and weakness

Business-level strategies

Generic Strategies

Create Survey Questionnaire

Survey on floriculture firms in Pune

Data Entry

Data Analysis

Result Report

Managerial Implication

Limitations and Conclusions

Figure 4.1 Research design
4.1 Research Aims:

Based on the previous discussions the main aim of the research is to study “Structure and organization of floriculture sector in Pune with special reference to issues relating to internationalization for attainment of sustainability.”

The aim of the research is to investigate marketing strategies and to provide a timely analysis of trends, opportunities and export potential of flowers from India. It will analyze how international trade is currently done with respect to floriculture and propose strategies that would help in boosting the floriculture export.

The research will identify the major international and domestic floriculture companies in Pune and also investigate and propose international orientation and marketing strategies that they could follow. To carry out exploratory research of the problems faced by the floriculture companies in Pune to export and find probable solutions to them. The research will try to give an insight into the floriculture production and marketing processes and also the steps taken by the local Governments, Chambers of commerce and industries, company associations, and local municipal corporations to make Pune the floriculture export Capital of India.

This research aims to describe theoretical approaches to ensure the sustainable development of floriculture in developing countries. Market growth and competitive advantage are used as indicators for sustainability. It will also provide an overview of floriculture worldwide. The conclusion is directed to the usefulness of the theoretical approaches for analyzing the sustainable development of the floriculture industry in developing countries. The impact on poverty reduction and the issue of capacity building are not within the scope of this study.

Using Porter's (1990) model of international competitive advantage, the flower export industries will be examined. While Porter (1990) maintains that a large and highly sophisticated domestic market is an advantage, in the flower export industry, a strong export culture is more important.
Based on the discussion above the aims of this research is to

- present the latest trends, overview and characteristics of the floriculture industry with special emphasis on India
- present the structure, composition and organization of the floriculture industry in Pune
- bring together the most important theories of Competitive Advantage and Internationalisation
- study the destination and methods of exports
- contribute to the knowledge about the internationalization process of floriculture industry in Pune
- to obtain and formulate a general synthesis of internal & external factors for developing competitive advantage and to access the importance and relevance of these factors to floriculture firms in Pune
- identify and compare the major managerial challenges, problems, export barriers and impediments facing the floriculture industry in Pune
- study how the theoretical framework/models can be used to help the case companies when they evaluate their own situation and to assist the business community in their efforts to develop competitive products and to market them more effectively with a view to expanding and diversifying their exports.
- to assess a theoretical framework to evaluate the sustainability of floriculture firms in India. In this, only the economic development will be taken into account. provide and propose strategic tools based on multi-theoretical frameworks which can be used by decision makers in the floriculture industry in Pune to aid them in decision making process to ensure the sustainable competitive advantage of floriculture firms in India. Market growth and competitive advantage are used as indicators for sustainability.

- investigate and propose alternate long term strategies for growth of floriculture industry in developing country’s like India which will assist them for the long term sustainable development and growth.
4.2 Hypothesis

According to Michael (1996) “testing of hypothesis is a prerequisite of any successful research, for it enables us to get rid of vague approaches and meaningless interpretations. It facilitates the collection of adequate facts, and helps one to arrive at appropriate conclusions, suggestions and observations.” Based on the literature review, research aims and discussions the following hypothesis can be developed for testing.

**H1** The floriculture sector in Pune has significant competitive advantage

An environmental scan using the five forces identifies external opportunities and threats that affect an industry’s overall attractiveness. “The collective strength of these forces determines the ultimate profit potential in the industry, where profit potential is measured in terms of long-run return on invested” Porter. In order to study the above hypothesis it can be broken down into 5 parts as per the five forces as described in the Porters model.

Bargaining power of suppliers affects the industry by suppliers’ ability to raise prices or reduce the quality of goods and services. Suppliers are likely to be powerful if:

- They are few in number,
- Each individual farmer purchase represents only a small amount of the companies’ sales,
- There are not good substitutes for the product purchased, and
- The product or service is unique.

**H1 a. The Bargaining power of suppliers is high in the floriculture sector in Pune**
Bargaining power of buyers affects the industry through the buyers’ ability to force down prices, bargain for higher quality or more services, and play competitors against each other. Buyers are likely to have power if:

- A buyer purchases a large part of the seller’s product,
- Alternative suppliers are plentiful because the product is undifferentiated,
- The buyers earn low profits and are sensitive to cost differences, and
- The purchased product is unimportant to the final quality or price of the buyers’ products.

**H1 b. Bargaining power of buyers is high in the floriculture industry in Pune**

New entrants usually bring new capacity and competition for customers and resources. This is a threat to existing businesses in the industry. Unless the demand for agricultural goods is increasing, additional capacity holds customers’ costs down, resulting in less revenue and lower returns for an industry’s firms.

**H1 c. Barriers to entry to new entrants are less in the floriculture industry in Pune**

Besides market competition between floricultural products, it is clear that these products are also facing more and more competition from other products, especially in the market segment for flowers and potted plants used as gifts on special occasions (birthdays, etc.). Substitute products are products that appear to be different but can satisfy the same need as another product. When switching costs are low, substitutes can place a price ceiling on products.

**H1 d. The floriculture industry in Pune has high threat of substitutes**

Rivalry among existing firms is the amount of direct competition in an industry. Industries that have intense competition are characterized by:

- Many competitors that are roughly equal in size,
- Slow rates of industry growth,
- The production of commodities,
- High fixed costs, and
• High exit barriers arising from investments in specialized equipment

**H1 e. There is intense Rivalry among competitors in the floriculture industry in Pune**

Higher strength of the five forces means less competitive advantages for the producers and a less attractive sector. Lower strength indicates significant competitive advantage for the floriculture firms and a attractive sector. As Porter (1980) notes: ‘a market is less attractive when most of the five forces are considered to be high’.

The main aim of the research is to evaluate and propose strategies for sustainability of Indian floriculture firms. Market growth and competitive advantage will be used as indicators for sustainability.

**H2 The floriculture industry in Pune is sustainable**

### 4.3 Research Methodology

#### 4.3.1. General Aspects

1. There are three classifications of research, as: exploratory research, descriptive research and explanatory research. (Yin, 1994)

   1. **Exploratory research**: involves the “preliminary exploration of a research area prior to the main quantitative data-collection stage” (Jobber, 2004, P181). It provides a first understanding of the relevant problem before doing the in-depth research. Secondary research, qualitative research, consultation with experts, and observation fall into this category. (Yin, 1994; Gephart, 2004)

   2. **Descriptive research**: collect and analyze data for an in-depth understanding of the research problem. The result of the research is derived from a conclusive description of the examined aspects or variables (Bryman and Bell, 2003). Such as quantitative research.
3 **Explanatory research**: is used to explain the empirical generalizations. (Yin, 1994) what means the researchers will formulates hypotheses of the result for the research problem before doing the research, and then test it.

4.3.2 Research approach

Due to the new development of floriculture industry industry, and data changes frequently, there are only a few studies research on this industry. Also, the regional differentiation increases the difficulty to collect the data. So the research of this study will only contain secondary research and qualitative research (such as in-depth interview) for gaining an understanding of this industry. (Gephart, 2004)

The approach used in this research is both exploratory and explanatory. The research has been divided into two parts. Research approach used in this thesis includes qualitative research and quantitative research because the strengths of it on its purpose, researcher, process and data collected. In the first part qualitative methodology has been used and quantitative methodology is used for the second part. The research design can be viewed in a number of steps and is shown in the figure

Research approach includes qualitative research and quantitative research. Comparing with quantitative research, qualitative research method is more appropriate to be used in this dissertation, that because the strengths of it on its purpose, researcher, process and data collected.
**Purpose:** it aims to explain the social phenomenon, which can’t be achieved by quantitative research method. The purpose of qualitative research is discover “how” and “why” of social attitudes, behaviors and phenomenon rather than calculate “how many” in quantitative research (Denzin & Lincoln, 1998; Glynda Hull, 1997). i.e. it focuses on interpretation, and understanding actors’ perspective. Thus, the research consists of words instead of number, which is more appropriate to describe and analyze the phenomenon, discuss the problems, and express the feelings of participants. Researcher in qualitative research has more involvement.Different from researchers in quantitative research who just need to design the questionnaires and calculate the percentage of people’s preference, qualitative researchers as a major instrument are involved in the research by interviewing, participating and observing. (Silverman, 2005) It requires the researchers keep a close and sustained contact with the participants.

Thus, the qualitative researchers are able to understand their participants much more than the quantitative researchers. It helps to reduce misunderstandings problems between researchers and respondents in quantitative researches. Also, the researcher’s personal involvement and partiality will be taken into the research. Thus, the researcher almost identifies contextual and setting factors as they relate to the phenomenon of interest. (Esterberg, 2002) Such as in in-depth interview, the researcher is able to explain the interviewee to answers the questions that he expected. Also, the researcher could change his questions casually then focuses on a particular topic in-depth if he found that are better to achieve the research objective. Thus, qualitative researchers are able to change their research in research progress, and improve their research skills and experiences during the research process.

**Process:** naturalismDuring the process of qualitative research, researchers contact real people in real situations and then provide understanding and description of people’s personal experiences of phenomena in their research reports. It can be seen as a great strength of qualitative research. I.e. within some quantitative researches, the questionnaire for an individual may be answered by some others (who may answer more than one questionnaires in this research), or it may be completed with a random answer. Thus, the data collected in qualitative research are more actual and factual. (Esterberg, 2002; Haralambos and Holborn, 1991)

In addition, the respond rate in qualitative research is higher than quantitative research where in qualitative research, the researchers are able to contact the real people, and induce them to
participate in the research. Also some uncompleted questionnaires that may be abandoned because of non-understanding questions, however this problem won’t be taken into the account of qualitative research. (Punch, 1998) I.e. qualitative research has higher quality responder than quantitative research.

Some of the features of the qualitative research should be stressed. It is conducted through an intense and/or prolonged contact with a “field” situation. The researcher herself is a farmer and has grown flowers in open fields. The researcher’s role is to gain a holistic overview of the context under study: its logic, its arrangements, its explicit and implicit rules. The researcher attempts to capture data on the perceptions of local actors from the inside and through a process of deep attentiveness. Relatively little standardized instrumentation is used at the outset. The researcher is essentially the main measurement device in the study. Most analysis is done with words. (Ghauri, Grönhaug, Kristianslund 1995; Miles, Huberman 1994) The problems of applied research arise from the complexity of the issues: there are many variables with different interrelationships. This means that a variety of knowledge bases and methods, each based on different assumptions, must be used. These knowledge bases and methods are typically at different levels of development and they do not fit coherently together in a way, which would allow the hypothetico-deductive method to operate. (Jankowicz 1995)

A methodological feature of this study is the use of the survey technique to obtain information on the determinant factors. An important advantage of this technique is that it provides direct measures (as compared to proxy variables used by most researchers) of the porters five forces. The direct measures are obtained by evaluating managerial perceptions about porters five forces, market potential, growth, and competitive advantages. Perceptual measures are particularly useful in the measurement of internalization advantages since past experience has shown that it is a difficult construct to quantify. Unlike location advantages, indicators of internalization advantages have not been appropriately identified in the entry mode literature to date.

Managerial perceptions are also relevant for the assessment of the location advantages of a specific country. It should be noted that these perceptions may be different due to variations in manager’s’ past experiences, level of knowledge, individual biases, etc. There is wide support
from the organizational behavior literature for the importance of managerial perceptions in decision making (Cyert and March 1963).

4.3.3 Plan of Research Work:

In this research four concrete methods will be used:
1. literature review, desk research
   a) written material, books and articles as source of information
   b) internet sources and electronic journals
   c) unpublished sources
2. face-to-face interviews in free format
3. non-participant observations, company and factory visits
4. Questionnaire

A literature search will be carried out to review relevant theories in supply chain, competitive advantage and sustainability. The tentative literature review topics will be as follows:
1. Overview of world floriculture market
2. Overview of the Indian floriculture sector
3. Structure, composition and organization of the floriculture industry in Pune
4. Study the supply chain of floriculture industry in Pune
5. Study the destination and method of flower exports
6. Review theories of Competitive Advantage and sustainability
7. Overview of framework used for research i.e. porters five force model and SWOT

The main sources for the literature survey would be Government publications, Chambers of commerce, floriculture firms, regulating bodies, libraries, internet, research journals, electronic journals, personal communication etc. Secondary data in relation to Indian floriculture industry and international marketing strategies will be undertaken via a comprehensive secondary research scheme.
4.3.4 **Quantitative Research and questionnaire:**

To validate the findings from the qualitative research and to test the hypothesis identified, a questionnaire will be developed. There will be two stages for quantitative data collection.

**Stage 1:**

This research aims to study the Structure and organization of floriculture sector in Pune with special reference to issues relating to internationalization for attainment of sustainability. Hence, a census survey of all the floriculture firms in Pune would be conducted during the period of research to find the companies which are exporting.

**Stage 2:**

The findings from the stage one will help in identifying the firms for further in-depth quantitative and qualitative research. An in-depth quantitative census survey of the floriculture firms in Pune which are exporting from will be carried out to generate the following data.

- Structure and organization
- Destination of exports
- Porters five force analysis
- Hypothesis testing
- Identify Important success factors and constraints faced
- Identify important elements of firm and International markets
- Provide synthesis of factor for industry competitiveness and macro environment

The purpose of the questionnaire is to solicit information from the survey subjects. In order to make the questionnaire acceptable to the industry respondents, specific efforts have been made in the following areas:

- The questionnaire was designed to create a clear guide for participants to finish the questionnaire quickly and accurately.
- Simple language and simplified ways for generating answers to questions were used to create confidence and to avoid misunderstanding.
The instructions at the beginning of the questionnaire made clear that respondents should answer all questions in the questionnaire, and all information is confidential.

It was tried to make the study as trustworthy as possible, although its validity and reliability have not actually measured. Before building the questionnaire and formulating the questions within, it was made sure that the researcher had reached an understanding concerning the theoretical framework. A result of this was that the questionnaire covered all parts of theory used. Efforts were therefore made to make the responses of these key informants as representative of the true situation as possible. The guidelines provided by Huber and Power (1985) for using a single informant in terms of motivation of informants to cooperate with the study seriously, assessment of alternate framing of questions, and use of structured questions were strictly followed in this study.

**Pre-test of questionnaire:**
The preliminary questionnaire instrument comprising the above sections was discussed with two top level executives and consultants from floriculture firms in Pune and as well as with five academicians. Based on their comments, some of the questionnaire items were modified. The modified questionnaire was pilot tested with top level executives from three firms in the sample. The objective of this test was to confirm that the items of the questionnaire were understandable and unambiguous. The questionnaire was modified on the basis of comments received during the pre-test. The intention was to present the questionnaire to a person at top management level familiar with the internationalization of the company. Discussions with executives during the pre-test phase of the study led to the conclusion that only the top level marketing executives had complete knowledge required for this study. The questionnaire was administered to the key-decision maker relating to international markets in each of the companies based in Pune which were exporting.

The firm specific data is collected first so that a realistic foundation was created for participants before attempting more speculative questions. The final version of the questionnaire was then used to conduct a census survey of the floriculture exporting firms in Pune. The full questionnaire is given in Appendix.
The questionnaire was administered through personal interview, with respondents completing it themselves in the presence of the interviewer, offering complete confidence that the enquiry was directed to the relevant respondent and assuring co-operation. In all cases the relevant respondent, i.e. the key decision-maker was identified in advance by telephone survey and subsequently visited. Since the same researcher administered all questionnaires, the impact of reactive experimenter effects was minimized.

Another persuasive argument for adopting such approaches is that it may be the only way of obtaining information from the key decision makers, given their noted reluctance to complete questionnaires sent by post. Moreover, a typical lack of published information (in the form of shareholder reports, commercial analyses, etc.), poor recording of internal data and a marked reluctance of small business manager’s to divulge commercially sensitive information also make other forms of enquiry particularly problematic (Carson et al., 1995). Given the preceding considerations, the nature of enquiry, the size of the target firms and evidence in the extant literature of network influences on internationalization, questionnaire was administered through personal interview were considered to be the most appropriate means of exploring the phenomena under investigation.

**Ethics and Confidentiality:**
An introductory letter was made for the purpose of clearly informing participants about their rights and benefits in taking part in the current research, what the research is all about and what the outcome of the research is to be used for. This letter also informs the participants to the research of their anonymity both in regard to themselves and their companies.

**Questionnaire scale and measurement:**
Quantitative research was conducted to meet the research aim and to prove the five hypothesis presented in the earlier section. The finding from qualitative research done in the first part were used to develop an comprehensive questionnaire. According to Emory and Cooper (1991), in measurement, one devises some form of scale and then transfers the observation onto this scale. In practice, respondents need a scale to respond quickly to questionnaires. A proper scale can also contribute efficiently to the accuracy of responses. Therefore, the ideal
scale is to help to achieve a precise and unambiguous measurement of the variables of interest (Emory and Cooper, 1991). As Cook (1998) pointed out, the rating format tries to make each point of the scale more meaningful to the rater, to make rating less arbitrary, and thereby increase reliability of the answers to the questionnaire. The meaning of the 1 to 5 Likert scale was described to each respondent and the respondents were asked to interpret the gap between each scaled items as one unit. This research uses 5 point Likert scale rating. The reason is that it is simple for respondents to make clear and quick judgments, an extended scale of more than 5 could incorrectly influence respondent’s judgment and slow the survey process. Five point likert scale and multiple choice questions were used to collect the data for other questions and research aims.

Sample and scope:

Scope of research.
The impact on poverty reduction and the issue of capacity building are not within the scope of this study. Sustainable development in this research has a rather limited and in fact an economic scope. The variables share on the world market, its development, market growth and a competitive advantage are used as indicators for sustainability.

Since high tech floriculture is mainly used for producing cut flowers this research will focus only on cut flowers.

The scope of research of this thesis is limited to Pune. Pune region has been chosen for the following reasons

• Pune in Maharashtra has also emerged as a major flower growing region. The city, and some of the neighboring areas, accounts for a third of flower exports from India.

• Pune and Bangalore are the two largest flower clusters in the country
• Maharashtra State Agriculture Marketing Board has setup an International Horticulture Training Centre (ISO 9001:2001 certified) at Talegaon near Pune, for training the farmers about the cultivation practices of cut flowers under controlled climatic conditions in Greenhouse.

• An Integrated Floriculture Park is setup having tie-up with Maharashtra Industrial Development Corporation (MIDC) near Talegaon having more than 50 hectares of land and more than 40 growers, it is the only such project in all over India. MIDC has given the land for the Floriculture Park on lease for 32 years.

• Pune has a very favorable climate for developing floriculture and Maharashtra is the fourth highest flower grower in the country.

• A state-of-the-art flower Rs 35-crore project auction centre in the city of PUNE that promises to be a miniature of the world's most prominent flower auction market of Aalsmeer in the Netherlands is on the way. It will establish Pune as a hub for distribution and pricing of a range of traditional and international-grade flowers.

• Pune is one of Six Agri Export Zones on floriculture have been set up in India.

• Pimpri Chinchwad township is separate from Pune on the basis of urban municipal corporations for urban governance. However, they both come under Pune district, when it is about district plans or policies. Pune district includes 16 talukas. Pune subdistrict includes East Haveli taluka, Pune city taluka, Pimpri-Chinchwad city taluka, and Khadakwasla taluka. Pune district comes under the agri export zone for grapes, floriculture, pomegranates, besides items such as cashew nuts. This sector too has received attention in the Nabard PLP.

TALEGOAN (PUNE):

• In Pune there is also great amount of domestic consumption for sectors such as horticulture, floriculture and others.

• The flower growers of Talegaon Dabhade and neighbouring areas has been successful in doing business worth Rs 15 crore during Valentine's Day. Talegaon and Maval region, near the industrial hub of Pimpri-Chinchwad, had conducted business worth Rs 10 crore in the global market and Rs 5 crore in the domestic market.
Hence Pune which is also the city where the researcher is located was chosen for the research and the scope of the research is limited only to the floriculture firms located in Pune which are exporting.

**Data Survey:**

There was no reliable single source to get the data of the floriculture firms in Pune. In the first phase a list of floriculture firms in Pune was generated. The sources for this data was internet, flower exhibitions, floral conferences, MCCIA, NHB, NHM ASSOCHAM, APEDA, western India floriculture association (wifa), Indian society of floriculture professionals, NABARD, Maharashtra floriculture development board, The rose society of Pune, MSAMB training centre Talegaon, Maharashtra agro industrial development corporation (MAIDC), MIDC, directories. The existence of these companies was verified by using the telephone and a comprehensive list of floriculture firms companies in Pune was prepared.

A telephonic survey was conducted to find out that how many floricultural firms are exporting flowers and are operational in Pune region. Only the firms which were exporting are taken into consideration for filling up the questionnaires. It was found out during the survey that there are 58 companies which are operational and exporting cut flowers from Pune region. Since the number is only 58 it was decided to have a census survey. Hence all 58 companies were considered. There were 6 companies who have reported that they were unable to provide the information and be part of the survey. Out of these 40 companies have responded to the researcher in filling up the questionnaires. Out of 40 questionnaires 3 questionnaires were discarded due to incomplete data. Hence 37 questionnaires were used for the analysis of the research. This analysis gave the percentage rate of 63.7 in the research. All the questionnaires were administered and filled by managers/ owners of the floricultural export units.

**Analysis of Data:**

The data generated from quantitative survey research was coded and inputted into a data sheet. This data was then electronically analysed using a statistical package SPSS. Bar charts, Pie charts, weighted averages and frequency distribution was used to present analysis and...
structure of the floriculture industry in Pune. The data for hypothesis was collected in a five point Likert scale. The data for the questions which used five point Likert scale was analysed using weighted averages, frequency distribution and mode. Pie charts and bar charts were used wherever necessary.

Respondents were asked to rate 35 statements concerning Porter’s five forces on a 5-point scale. The scale ranged from ‘1 – strongly disagree’ meaning that a certain statement has no relevance, to ‘5 – strongly agree’ meaning a statement has high relevance. Value ‘3’ meant that a statement had an average relevance. Different weights were given to the statements. Weight of statements having positive effect on strength of the force were given from 5 to 1 and weight of statements having negative effect on strength of the force were given from 1 to 5. For example, low entry barriers for new entrants meant a high threat for the existing companies in the industry. The analysis of the five forces has a goal to indicate, which competitive strategy should be applied, taking into account the strength of these forces in order to attain sustainability. Therefore, in order to define the strength of the forces the following strength’s level classification was made: Classification of forces’ strength was done. Higher strength of the five forces means less competitive advantages for the producers and a less attractive sector. Lower strength indicates significant competitive advantage for the floriculture firms and an attractive sector.

For each of the five forces ratings were collected for Seven statements. The gathered data was analysed using descriptive statistics in SPSS. The results of this analysis, which are presented below in the graphs (bar charts) and tables, include the mean scores for the forces and the mean scores for variables constructing each force with corresponding standard deviations. The mean scores ranged from ‘1’ indicating that a certain variable has no relevance, to ‘5’ indicating a variable has high relevance. Mean score of ‘3’ means that a variable has an average relevance. Standard deviations measure how well the mean represents the data. Small standard deviation (relative to the mean) indicates that data points are close to the mean. Large standard deviation (relative to the mean) indicates that the data points are distant from the mean (Field 2005).
Five point Likert scales were used to identify factors for success, industry competition and Macro environment and constraints facing the floriculture firms in Pune. Weights were given to the responses for each factor and weighted averages, mean and mode was used to rank the factors.

Then the weighted average for each was calculated as \( \frac{\sum x}{\sum f} \)

where \( x \) = weight

\( f \) = frequency of response

The research is different in the following respects.

First, rather than replicate previous studies of large multinational manufacturing firms, the researcher has selected an industry that is extensively populated by small - and medium-sized firms: the Floriculture industry.

Second, researcher has attempted to add to the previous empirical research studies that have applied Porters five force and generic strategy to the Floriculture sector.

Third, researcher has tried to explore a high-technology area of horticulture sector that has experienced rapid growth in the past two decades but has received little attention from researchers to date: the floriculture industry and that too from developing countries.

Fourth, the study includes the analysis of both micro and macro environment unlike previous investigations which typically included only either one of the environment.

Fifth, the study uses managerial perceptions for measuring the explanatory factors.

4.4 Summary

This chapter has identified the research aims, hypothesis and research methodology used for this research. The study is based on empirical evidence and futuristic analysis. A combination
of both qualitative and quantitative methods were employed. The main phases of research design involved literature and document analysis, the survey and finally the analysis of the whole data set. The data generated from quantitative survey research was electronically analysed using the statistical package SPSS. Pie charts and bar charts were used wherever necessary.