CHAPTER – IV

RESEARCH METHODOLOGY
4.0 Introduction

In this chapter materials and methods, data collection instrument, validity of the questionnaire, reliability of the questionnaire, distribution of questionnaires, hypotheses of the study and techniques used in data analysis are presented.

4.1 Materials and Methods

This research is a quantitative study which is conducted in SMEs of Tehran Province, Iran. Tehran province -the capital of Iran- was studied, mainly because of the most recent formal national statistics published by Statistic Center of Iran (SCI) show that more than 27% of all SMEs in Iran are working in Tehran (Total number of provinces: 32).

To date, 104 firms in the fruits and vegetables industry have registered in Ministry of Agriculture (MoA) formally in Tehran province from which 80 firms were active (44 exporter SMEs, 36 non-exporter SMEs) when the research was conducted (2010 to 2011). Other 24 firms were not in business any longer. Total population of respondents in this study was 80 managers (managers of SMEs).

4.1.1 Data Collection Instrument

For the purpose of data collection, a structured questionnaire was designed and used. Broadly, the questionnaire had five parts and each of these parts was covered by several questions to elicit information. Generally, there were thirty nine questions in these parts. The questions contained different types of question format: two way questions (yes/no), multiple choice questions and Likert scale. The final questionnaire mainly concerns with the aspects as noted below.

Part I: Personal Information

This part of the questionnaire deals with personal information of SMEs managers.

Part II: Background Information of SMEs

This part of the questionnaire deals with background information of SMEs, this part had 2 sections, one section contains items regarding information on SMEs, other section is about reasons for exporting and barriers export. The question about reasons
for exporting is taken from review literature and researches of Kazem and Van der Heijden (2006) and the question about export barriers was developed based on the modified model of Leonidou (2004) that classified exporting barriers into external and internal. According to this classification, the internal barriers (related to organizational capabilities / resources and company approach to export business) are classified into informational, functional, financial and marketing barriers and external barriers (related to the home and host environment within which the firm operates) are classified into procedural, governmental, task and environmental barriers.

Part III: SME’s Strategies

This part of the questionnaire deals with SMEs strategies, this part had 4 sections, first section was related to production strategies, second section was related to export strategies, third section was related to financial strategies and forth section was related to marketing strategies. This part of questioner is taken from review literature and researches of Kazem and Van der Heijden (2006).

Part IV: Entrepreneurial Orientation

The fourth part of the questionnaire highlights the entrepreneurial orientation, this part had 5 sections, first section was related to innovativeness, second section was related to risk taking, third section was related to pro-activeness, fourth section was related to autonomy and fifth section was related to competitive aggressiveness. In this part, the questionnaire developed was used by Covin and Slevin (1990), Lumpkin and Dess (1996) and Miller (1983) to measure the EO.

Part V: Export Performance

This part of the questionnaire deals with export performance of SMEs. This part is taken from review literature and researches of Shoham (1996) and Sousa (2004).
Figure 4.1 Flow Chart of Questionnaire Administered

**Section A: Personal Information**
- Qn 01. Name
- Qn 02. Designation
- Qn 03. Gender
- Qn 04. Age
- Qn 05. Level of your Education
- Qn 06. Discipline/Subject
- Qn 07. Level of Computer Literacy
- Qn 08. Familiarity with Use of the Internet
- Qn 09. Personal E-mail
- Qn 10. Experience in F&V
- Qn 11. Experience in Exports of F&V

**Section B: Enterprise Information**
- Qn 12. Name and address
- Qn 13. Phone No
- Qn 14. Fax No
- Qn 15. E-mail
- Qn 16. Web-site
- Qn 17. Experience
- Qn 18. Experience in Export
- Qn 19. Type of Enterprise
- Qn 20. No of employees working in
- Qn 21. No of employees involved in
- Qn 22. Fixed Capital
- Qn 23. Own Website
- Qn 24. Applications of Web-site
- Qn 25. Contact With Customers
- Qn 26. Attract New Customers
- Qn 27. Services
- Qn 28. Reasons for Exporting
- Qn 29. Exporting Barriers

**Section C: Enterprise Strategies**
- Qn 30. Production Strategies (Contains 9 Statements)
- Qn 31. Export Strategies (Contains 7 Statements)
- Qn 32. Financial strategies (Contains 4 Statements)
- Qn 33. Marketing Strategies (Contains 22 Statements)

**Section D: Entrepreneurial Orientation**
- Qn 34. Innovativeness (Contains 12 Statements)
- Qn 35. Risk Taking (Contains 11 Statements)
- Qn 36. Pro-activeness (Contains 20 Statements)
- Qn 37. Autonomy (Contains 11 Statements)
- Qn 38. Competitive Aggressiveness (Contains 13 Statements)

**Section E: Export Performance**
- Qn 39. Export Performance (Contains 5 Statements)
4.1.2 Validity of the Questionnaire

Before finalizing the questionnaire, an attempt was made to get it reviewed by six experts in the field of entrepreneurship, export and statistic. The suggestions thus obtained by the experts were promptly incorporated to enhance the validity of the questionnaire.

4.1.3 Reliability of the Questionnaire

After the necessary revisions were made, preliminary questionnaire was pretested through a pilot study. The purpose of pretesting of the questionnaire is to obtain information to improve its content, eliminate ambiguity in some questions and to fine tune the questionnaire. For this purpose in pilot study, 20 managers of SMEs were selected randomly. Based on the information elicited by the questionnaire, it was further improved and revised in its format, content and sequence for final use in the survey. Moreover, the final questionnaire was translated into Persian. The English and Persian questionnaires are given in Appendix A and Appendix B.

In order to get the reliability of the questionnaire, Cronbach’s Alpha was done on the collected data by the preliminary questionnaires in the pilot test. Cronbach’s Alpha obtained as 0.98. Cronbach’s Alpha is a value between zero and one. Values near zero indicate low reliability; values near one indicate high reliability (Cronbach, 1951).

4.2 SMEs-Wise Distribution of Questionnaires

The primary data was collected through a well structured questionnaire and informal interview. The questionnaire was divided into five parts. Two parts of questionnaire included a series of questions on the SMEs and respondents’ demographic data. The eleven questions in first part are related to respondents and eighteen questions in second part are related to SMEs on demographics attempted to create a profile of the participants and to identify factors that may affect on export of SMEs.

In total 80 questionnaires were distributed in person and e-mail among the SMEs’ managers of Tehran province in Iran, of which 76 useable questionnaires were received 95%. Of 44 questionnaires were distributed to the exporter SMEs of Tehran.
in person and e-mail, 44 useable questionnaires were received. However, of 36 questionnaires were distributed to the non-exporter SMEs of Tehran in person and e-mail, 32 useable questionnaires were received. The SMEs-wise details of the questionnaire were distributed in person and via e-mail to the sample population as well as the responses received from them are detailed in Table 1.

Table 4.1

<table>
<thead>
<tr>
<th>Type of SMEs</th>
<th>Questionnaires Distributed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In Person</td>
<td>Via E-mail</td>
</tr>
<tr>
<td></td>
<td>Distributed</td>
<td>Received</td>
</tr>
<tr>
<td>Exporter</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Non-Exporter</td>
<td>32</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>64</td>
</tr>
</tbody>
</table>

4.3 Hypotheses of the Study

**Hypothesis 1**: There is a significant difference between exporter and non-exporter SMEs in the Enterprise Strategies (Production, Export, Financial and Marketing Strategies).

**Figure 4.2 Hypothesis 1 Conceptual Frameworks**
**Hypothesis 2**: There is a significant difference between exporter and non-exporter SMEs in the Entrepreneurial Orientation (Innovativeness, Risk Taking, Pro-activeness, Autonomy and Competitive Aggressiveness).

**Figure 4.3 Hypothesis 2 Conceptual Frameworks**

**Hypothesis 3**: There is a significant relationship between export barriers and export performance.

**Hypothesis 4**: There is a significant relationship between SMEs Strategies (Export Strategy, Marketing Strategy, Production Strategy and Financial Strategy) and Export Performance.

**Figure 4.4 Hypothesis 4 Conceptual Frameworks**
**Hypothesis 5**: There is a significant relationship between Entrepreneurial Orientation (Innovativeness, Risk Taking, Pro-activeness, Autonomy and Competitive Aggressiveness) and Export Performance.

**Figure 4.5 Hypothesis 5 Conceptual Frameworks**

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**4.4 Techniques Used in Data Analysis**

The 76 useable questionnaires were coded after data collection. The data obtained were tabulated and analyzed using the Statistical Package for the Social Sciences (SPSS) Version 20 and Excel. Hypotheses are tested and findings are drawn in the light of the objectives of the investigation. Finally, the results were reported in the form of thesis.

Tables, charts and figures were used wherever necessary to make the presentation clear, simple and lucid. Following statistical tools and techniques were used: Frequency, Percentage, Mean, Standard deviation, $\chi^2$ (Chi-square) test, Independent- Samples t-test, Friedman test, Analysis of Variance (ANOVA), Mann-Whitney test, Correlation, Kolmogorov-Smirnov test and Regression.
4.5 Summary

This research is a quantitative study which is conducted in fruits and vegetables SMEs of Tehran Province, Iran. Tehran province -the capital of Iran- was studied, mainly because of the most recent formal national statistics published by Statistic Center of Iran (SCI) show that more than 27% of all SMEs in Iran are working in Tehran (Total number of provinces: 32).

The sample consisted of all exporter and non exporter SMEs of fruits and vegetables in Tehran. In total, there were 80 exporters and non-exporter SMEs of fruits and vegetables in Tehran. The survey involved face-to-face interviews and email for data collection based on a questionnaire prepared in December 2011.

To examine the reliability of the questionnaire, a pilot study was conducted on 15 out of 76 SMEs and Cronbach’s alpha for the items of Likert type scales were computed as 0.98. In this research, content and face validity were established by a group of export experts and SME’s experts.

We used Frequency, Percentage, Mean, Standard deviation, $\chi^2$ (Chi-square) test, Independent- Samples t-test, Friedman test, Analysis of Variance (ANOVA), Mann-Whitney test, Correlation, Kolmogorov-Smirnov test and Regression, the analysis was carried out using the "Statistical Package for the Social Sciences" (SPSS 20) and Excel.