

CHAPTER III

RESEARCH METHODOLOGY

This Chapter deals with the methodology adopted while conducting this research. It includes the research purpose, research strategy, research approach and the methodology used for developing the instrument, sampling pattern, and data collection. The chapter also includes a brief summary of the statistical analysis.

3.1 RESEARCH PURPOSE

The research purpose shows that the present study is descriptive and causal in nature. A descriptive research design is used to define the state of nature at a point in time (Koh and Owen, 2000). The purpose of this design remains to “systematically and accurately describe the facts and characteristics of a given population or area of interest” (Isaac, 1979). These studies serve to observe, describe, and document aspects of a situation as it naturally occurs (Dulock, 1993). The present study is an attempt to measure the entrepreneurial competencies and emotional intelligence of women entrepreneurs in Tamil Nadu and their influence on the firm performance and entrepreneurial life satisfaction of the respondents. A structured questionnaire has been used to conduct the survey and collect the data from the respondents. Thus, a descriptive survey research design has been employed to serve the purpose of the study. Further since the study also aims to unveil the relationship between the factors competencies, and emotional intelligence on the outcome i.e. firm performance, and entrepreneurial life satisfaction, it also falls under the category of studies with a causal research design.

3.2 RESEARCH STRATEGY

As mentioned above the present study has made use of a survey strategy approach in order to obtain responses from women entrepreneurs across Tamil Nadu. The questionnaire created has items to assess the entrepreneurial competencies, emotional intelligence, firm performance and entrepreneurial life satisfaction.

3.3 RESEARCH APPROACH

The study adopts a Quantitative approach. The responses for the items have been collected using a three point Likert Scale with ends 3 - Agree; 2 - No opinion; and 1 - Disagree.

3.4 INSTRUMENT DEVELOPMENT

Review of related literature is an essential part of the research process (Hart, 1988) and helps in gaining a better sense of the conceptual meaning of the focal constructs (Mackenzie, 2003). A proper understanding of the definitions of the constructs is crucial in identifying a comprehensive list of factors under each of them and subsequently to create an appropriate survey instrument. Following the guidelines mentioned in the previous chapters the study has adopted those entrepreneurial competencies which are considered to be important in determining the success of an entrepreneurial venture. Competencies namely Opportunity, Relationship, Commitment, Organizing & Leading, Strategic, Conceptual, Learning and Familism have been chosen after a thorough search of the available entrepreneurship literature. Likewise, the performance of a woman held venture has been assessed from the financial as well as non-financial dimensions, as seen in the majority of the previously conducted studies.

3.4.1 Questionnaire Used for the Study

The study adopts Likert's three-point scaling technique to assess the level of opinion of the respondents on the various dimensions relating to the study. The questionnaire has two parts. The first part is related to demographic profile of the respondents and the second part contains items used to assess the various study variables namely entrepreneurial competencies, emotional intelligence, entrepreneurial life satisfaction, financial and non-financial performance levels.

Demographic factors: Demographics refer to particular characteristics of a population and demographic variables are used to obtain data that helps to describe the nature and distribution of the sample population. This study has employed factors like age, gender, age at which the business was started, marital status, occupation of their parents, personal education levels and experience levels. This part of the

questionnaire also includes questions pertaining to the ventures run by the respondents like the type of ownership structure, Number of employees, Nature of the firm. (Appendix I: Q1- Q12)

Measures used for the study: The main study variables namely Entrepreneurial competencies viz Opportunity, Relationship, Commitment, Organizing & Leading, Strategic, Conceptual, Learning and Familism competencies, Emotional intelligence, Financial and non-financial performance and Entrepreneurial life satisfaction have been measured using items with interval scale. The various steps followed in identifying and creating a unified instrument to measure the above-mentioned study variables have been explained in detail.

Entrepreneurial competencies: According to Bird (1995), entrepreneurial competencies are the “underlying characteristics like generic and specific knowledge, motives, traits, self-images, social roles and skills which result in venture birth, survival and growth”. As documented in the literature review the present study has analyzed the various models based on entrepreneurial competencies studied by various researchers across time (Chandler and Jansen, 1992; Barkham, 1994; Man in 2001; Lerner and Almor in 2002; Noor et al., 2009) before selecting the variables mentioned above. Among the previously conducted studies, study by Man (2001) has been considered the most comprehensive and widely known studies concerning entrepreneurial competencies. This study has been quoted the most by competency researchers since the study has meticulously explored the various desired entrepreneurial behaviors before putting together a list of entrepreneurial competencies considered necessary for a successful entrepreneurial outcome. The study has also identified the various factors that can be used to assess each of the entrepreneurial competencies, thus contributing to the body of knowledge, a unified survey instrument that has been adapted for the present study.

Items to measure the entrepreneurial competencies such as Opportunity, Relationship, Commitment, Organizing & Leading, Strategic, Conceptual, Learning competencies were taken from the study by Man (2001). This instrument has been widely used by various other studies in this genre (Ahmad, 2007; Lopa& Bose, 2014; Kabir et al., 2017; Ahmad et al., 2018). The Familism competency as well the items to measure the same has been borrowed from the study by Ahmad (2007).

Financial and non-financial firm performance: The firm performance has been measured using the self reported satisfaction levels of the entrepreneurs related to the performance of their firms financially as well as non-financially. Due to the various problems associated with objective firm performance measures, namely inconsistent growth rates that result in extreme outliers that are not suitable for statistical analysis; lack of performance information and high non disclosure rates which questions the reliability of the instrument (Chandler & Hanks. 1993) subjective measurement of firm performance has been recommended by studies like Dess and Robinson, (1984); Gupta and Govindarajan, (1984); Chandler and Jansen (1992); Man, (2001); and Noor, (2007). When respondents are asked for financial values and statements, they are generally hesitant and hence might not reveal the actual picture. Such data collected may only hamper the research process and decrease the credibility of the research outcomes. Citing these reasons many researchers Gooderham et al.(2008), Rizov and Croucher (2009); Bradley et al.(2012); Real et al.(2014) have adopted subjective measures to assess a firm's performance. In fact Murphy et al. (1996) and Gupta and Govindarajan, (1984) find that the perceptual measures correlate with objective firm performance measures. Likewise, the use of non-financial measures has also been used since previous research has shown that many entrepreneurs attach more importance and value to the non financial performance of their firms. Murphy and Callaway (2004) also recommend measuring firm performance in both financial and non-financial dimensions. Hence in order to gain a wholesome view of the entrepreneur's perception of the firm performance, both financial and non-financial firm performance has been measured.

The measure used to assess the firm performance has also been borrowed from Man (2001). The non-financial firm performance measures has been borrowed from the studies by Ahmad (2007), Keh et al. (2007); Wodongo et al. (2010). Few items in Ahmad (2007) study like 'self- satisfaction' and 'satisfaction with career progress' were removed since the present study has assessed entrepreneurial life satisfaction scale as a separate construct. Two non-financial performance measures like 'Realization of firm goals' and 'extent of resource utilization' were borrowed from studies by Baer &Frese, (2003); Keh et al. (2007); and Wodongo et al. (2010).

Emotional intelligence: Emotional intelligence has been measured using the infamous Wong and Law's (2002) 16 item questionnaire. The questionnaire has been employed by various studies (Song et al. (2009); Libberecht et al. (2010); Kim et al. (2012); Kong et al. (2012); Veseley et al. (2014) to measure the emotional intelligence of the respondents.

3.4.2 Development of Entrepreneurial Life Satisfaction Scale:

Through extensive investigation of literature, the construct Entrepreneurial life satisfaction scale was conceived and a scale was developed to measure the same. The objective of the construct was to measure the satisfaction of the women entrepreneurs with their career choice and the way their career life as self employed has progressed. Though there are instruments that measure career satisfaction, job satisfaction and general life satisfaction, these have not been developed specifically for entrepreneurs or more specifically for women.

The scale generation process has been done systematically as follows. Through available literature as discussed in Chapter 2, the study identified that women are motivated by both intrinsic and extrinsic rewards when opting for entrepreneurship. From the available literature it can also be seen that the motivations of women entrepreneurs differ according to economy and several other factors. In order to understand the factors that contribute to their satisfaction with entrepreneurial life, it was necessary to ascertain the motivations behind their career choice and the benefits that they highly value from their career. In order to understand the same a focus group interview was conducted.

Focus group Interview: According to Thomas et al. (1995) a focus group interview is a technique that involves in depth group interview where the participants are selected on the criteria that they would be able to contribute to the selected topic. The information obtained is often richer than what individual interviews might yield (Thomas et al., 1995). Apart from the participants a moderator is also required for successful focus group interview. A trained moderator or facilitator plays an important role in the interview, where he creates an environment where the participants are at ease and share their views without inhibitions (Krueger, 1994; Burrows & Kendall, 1997). According to Krueger & Casey (2000) in smaller

numbers, these focus groups are manageable and have greater potential than larger ones. Therefore, a focus group interview was conducted with 10 select entrepreneurs and a trained moderator. These entrepreneurs were in the business for more than three years, and employed more than five people. The participants were explained about the purpose of the group interview and their consent was obtained. The whole interview was audio recorded, the findings transcribed and grouped under different themes. The note from the reflective diary of the moderator was also included for analysis and interpretation. The finding of the focus group interview was compared with the literature available to come up with the factors that majorly contribute to the Entrepreneurial life satisfaction of the women entrepreneurs. The research question that was discussed is as follows.

Research Questions:

- What are the advantages/benefits of being a woman entrepreneur that you value the most?
- How being an entrepreneur has made your life better?

Table 3.1: Demographic profile of the focus group interview participants

Respondent	Years in business	Marital status	No of employees employed	Nature of organization/business
R1	5	Married	8	Designer/Boutique
R2	4	Married	10	Tailoring Shop
R3	7	Married	6	Boutique
R4	6	Married	27	Garment Exports
R5	7	Married	8	Retail shop
R6	7	Married	15	Web Development company
R7	7	Widowed	9	Digital media company
R8	12	Divorced	6	Beauty Salon
R9	10	Married	10	Home stay
R10	8	Widowed	10	Restaurant

Findings from the focus group interview: The findings of the focus group interview showed that the perceptions of the women entrepreneurs regarding the benefits of an entrepreneurial life varied. The differences could be attributed to their varied economic, social, personal needs and life circumstances. However certain factors emerged as the basic themes and were agreed upon by most of the respondents. Most of the respondents talked about how the career helps them to feel independent. In the words of the respondents,

Autonomy

Autonomy happened to be the most important benefit that all respondents felt as benefit of entrepreneurship. Being one's own boss and not having to answer anyone makes them feel empowered.

R4: "I was in a company for 10 years. I remember running to catch the bus every morning. I had to reach there on time. I could not be even five minutes late. Now it is not like that. I am the boss. I don't need to answer anyone."

R8: "It is a different feeling. I take all the decisions in business. Though it is difficult, it also feels good"

R7: "You have advantages if you are entrepreneur. I bring my son to my shop when he has holidays. No one can ask me anything. This is not possible if you are going for a job"

R9: "My husband lost his job during recession. If you are in a private job you will always have worry about job security. Now we run this business together. We do not have to worry about losing jobs"

Work Life Balance

The most important factor that emerged from the findings of the study is the work life balance. All the respondents seemed to acknowledge it as an obvious advantage of being an entrepreneur.

R1: "I have two children. It is difficult to manage them and also go to a job. Having my own business helps me to spend time with them. I work when they are at school. Most of the evenings I am with them"

R2: "My husband would not allow me to go for a 9 to 5 job. I stay with my in-laws. They are old and need someone to look after them. Since I have my own business, I am able to have a career and my husband has no problem"

R3: "When you have your own business, you are not stressed. On weekends my employees take care of the shop. I come in late. I also take some time off if I am not well or if I have to go to some functions"

R10: "Managing restaurant is not easy. I have lots of work; I work for 8 hrs every day sometimes more than that during peak season. But when my son comes home from hostel, I take a whole week off. My employees manage everything"

Gaining Respect

Another factor that emerged from the findings of the study is that women entrepreneurs noted that their work had earned them respect from the significant others in their life. They valued and relished the respect they got from family, friends and society.

R2: "In the beginning my husband did not like my business idea. Once when he was in need of some money to buy a land, I contributed the money I had earned. He never thought I could earn much from my tailoring shop. My in-laws have also changed... Now they ask my opinion before taking any decision... .."

R6: "Running a business is not easy. My husband also had done it. When I started earning well, he was surprised. He appreciates a lot. Even my friends ask me advise ... I feel I have become important person"

Financial Independence

As mentioned in the literatures, women entrepreneurs seem to value the financial independence they attain through their self-employment. Similar to individuals in a regular job, entrepreneurs also value the monetary benefits their work provides. In fact, some of them were pushed into entrepreneurship for its financial benefits.

R10: “When my husband died suddenly, I had my four-year-old son to take care of. I was a BCom graduate and those days’ jobs paid very less. With my parents’ money I started a small eatery. Today I own a house, gave good education for my son and I have 10 people working under me. I cannot imagine doing all this with a job”

R5: “Before this I was working in Montessori. I worked all day and was paid very less. I got frustrated and started my own shop. I earn way more than what I earned Within six months of starting my shop, I was able to get a two-wheeler. If your business does well, you can earn well”

Self- esteem

R3: “I remember the time when I had to depend on my husband for everything. I was not good at studies. I never thought I would earn and have my own money....But today I have my own business. I get surprise gifts for my kids and my mother too. I also pay the house rent for my mother. My mother is so proud of me and she tells it to everyone. I feel proud of myself”

Happiness by generating employment

R6: “When I was a homemaker, I used to feel lonely sitting at home. My husband was busy with his work and my son was in school. I felt like I was wasting my time and education. I had done engineering but was not in a position to go for a job. Then I started my web development company with another friend. Now my life is more meaningful. I have a purpose and we have 15 employees.....”

R8: “There have been times when I wanted to close my business, but I kept running it. The main reason is that there were six people working for me. Initially the money I earned was only enough to pay the shop rent and the employees. But I was glad, that my business was at least paying the employees. It made me survive through tough situations.... Last year I helped my employee with her daughter’s college expenses. You will feel happy when they look at you with gratitude”

R2: “Most of my employees are women. They are more like a family to me. We work together, I have taught two of them cutting techniques... Someday they will also be able to open their own shops. I will be happy if that happens. I think all women should and can become entrepreneurs”

Though there were a lot of insights from the focus group interview, most of them could be grouped under the following basic themes.

- Autonomy
- Work life balance
- Self - esteem
- Financial independence
- Generate employment
- Gain respect from family

The respondents who participated though differed in their socio economic, educational; family backgrounds but expressed similar views about their entrepreneurial journey. Having said that, the value they placed on each aspect would differ according to their needs and motivations.

Scale Construction: Using the findings of the focus group interview, the scale was constructed using six items that were based on the six factors identified. They include Autonomy, Work life balance, Self-esteem, Generate employment, Respect from others and Financial independence. Two items of the scale have been borrowed from the Satisfaction with life scale (SWLS) by Diener, (1985). The item ‘I am satisfied with my life (Diener, 1985) ‘was changed to ‘I am satisfied with my life as an entrepreneur’ and the item ‘If I could live my life over, I would change almost nothing (Diener, 1985)’ was changed to ‘If I could choose my career over, I would change almost nothing’. Thus, the eight-item scale for Entrepreneurial life satisfaction was constructed on a three-point Likert scale just like the other constructs in the study instrument. A similar approach has been followed by Dijkhuizen et al. (2017) to measure entrepreneurial life satisfaction. The constructed scale was approved by two academicians and four entrepreneurs who were not a part of the focus group interview. Once they approved the scale was used to collect data so that its reliability and validity could be analyzed.

Table 3.2 gives the list of constructs; their operational definitions; the primary study from which the measures have been adapted and the number of items used to measure each of the construct.

Table 3.2: Measures used for the study

Construct	Operational definition	Author	Number of Items
Opportunity competency (OPC)	“The ability of an entrepreneur to pro actively look and capture new business opportunities; identify and satisfy customer needs; consider problems as opportunities and take considerable risks”	Man (2001)	6
Relationship competency (RC)	“This entrepreneurial ability is concerned with developing and maintaining good relationships; being able to hold meaningful discussions and possessing good networking skills”	Man (2001)	6
Commitment competency (CC)	“The ability of an entrepreneur to stay dedicated to the firm; deal with difficult situations; stay motivated and work towards long term business plans”	Man (2001)	4
Organizing competency (OC)	“The ability of an entrepreneur to organize resources; co-ordinate day to day activities; Supervise, lead and motivate employees; Delegate work and indulge in all activities that ensure the smooth running of an organization”	Man (2001)	8
Strategic competency(SC)	“The ability of an entrepreneur to foresee the future of the firm, develop long term plans, goals, develop appropriate action plans to achieve the goals and monitor the progress of the firm”	Man (2001)	9
Conceptual competency (CC)	“The ability of an individual to apply ideas, reasoning to contexts, identify opportunities in problems, take reasonable risks and convert ideas into profitable business plans”	Man (2001)	7

Learning competency (LC)	“The ability of an individual to proactively learn from situations; experiences; and stay updated in one’s field”	Man (2001)	5
Familism competency (FC)	“An entrepreneur’s ability to cultivate entrepreneurial culture in their family, help others to perform well in their business by; seek help/advice from trusted employees, family, friends; prepare children to take over the business in future and share resources with friends and family”	Noor (2007)	6
Emotional intelligence (EI)	“The ability of an individual to identify and evaluate the emotions of one self and that of others; regulate one’s own emotions and harness the power of emotions to indulge in constructive behavior which will likely result in enhanced performance levels”	Wong and Law (2002)	16
Entrepreneurial life satisfaction	“The satisfaction of an entrepreneur with his/her career choice and the way their career has progressed”	Developed by the study	8
Financial firm performance	“An entrepreneur’s perceived level of satisfaction with the financial performance of a firm over a certain period of time”	Noor (2007)	6
Non-financial firm performance	“Entrepreneur’s perceived level of satisfaction with the non-financial performance of a firm over a certain period of time”	Noor (2007); Keh et al. (2007); Wodongo et al. (2010)	8

3.5 INSTRUMENT VALIDATION

3.5.1 Content validity

According to Haynes et al. (1995) “Content validity is the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose”. The present study also ensures the content validity of the survey instrument using the below mentioned measures. It is imperative that every instrument used for research purposes should be checked for its content and criterion-oriented validity in order to ensure that both the constructs and sub constructs represent the chosen domain area (Cronbach and Meehl, 1955). Content validity is ensured using the consensus arrived after a detailed discussion with experts in the domain (Hambleton and Rogers, 1991; Haynes and Richards, 1995). Panel members evaluate the various questions and decide whether or not they are related to the construct. A detailed discussion is held to understand if the items successfully measure a particular construct. Content validity of the instrument has been ensured in two stages. During the first stage two domain experts and three academicians were contacted and their approval was obtained.

In the next stage, suggestions were received regarding the language appropriateness of the questionnaire. The members felt that a few words need to be modified and sentences paraphrased in order to increase the understandability of the questionnaire. For instance, in the construct, Opportunity Competence, the item “As the owner of the firm, I am able to perceive unmet consumer needs” was replaced with “As the owner of the firm, I am able to identify unmet consumer needs”. Likewise, the item “As the owner of the firm, I am able to seize high-quality business opportunities” has been reworded as “As the owner of the firm, I am able to capture new business opportunities”. In the construct, Relationship competency, the item “As the owner of the firm, I am able to negotiate with others” has been replaced by “As the owner of the firm, I am able to hold discussion with others”. The item “As the owner of the firm, I am able to understand what others mean by their words and actions” has been made simpler by replacing it with “As the owner of the firm, I am able to understand others”. In the construct, Organizing competency, the word “As the owner of the firm, I am able to supervise subordinates and people” have been replaced with the term “As the owner of the firm, I am able to supervise employees” to suit the

Indian context. In the construct, Learning competency, the item “As the owner of the firm, I am able to learn from a variety of means” has been reframed as “As the owner of the firm, I am able to learn from different situations” and the item “As the owner of the firm, I am able to keep up to date in my field” has been rephrased as “As the owner of the firm, I am able to keep myself up to date in my field”. Similarly, the item “As the owner of the firm, I am able to apply learned skills and knowledge into actual practices” has been modified as “As the owner of the firm, I am able to apply learned skills and knowledge into actual business situations”. In the construct Familism, the words “Cultivate” has been replaced with “Develop”. For eg: As the owner of the firm, I am able to develop an entrepreneurial culture in my family and term like “Associates” has been replaced with the word “Friends” eg : “As the owner of the firm, I am able to share knowledge and resources with friends “since it is more relatable in the Indian scenario.

Since the present study measures Entrepreneurial life satisfaction as a separate construct, the indicators relating to the entrepreneur like ‘self-satisfaction’ and ‘career progresses were removed. Two items ‘Realization of firm goals’ (Keh et al., 2007) an ‘Extent of resource utilization’ from a study by Wodongo et al. (2010) was added as the non-financial firm performance indicators.

Based on the feedback received from the panel members, certain measures in the financial firm performance like “Expenses” were removed since it was not much relatable. The term “Workplace industrial Relations” was replaced with Workplace relations in order to make it simpler. Hence the item measured the level of satisfaction of the entrepreneur with work place relations on 3-point Likert scale where 1 = Not at all satisfied and 3 = highly satisfied. The above-mentioned changes were done based on the feedback and suggestions given by the panel members in order to ensure the content validity of the survey instrument.

3.5.2 Reliability of the constructs

Once the content validity is ensured the reliability of the survey instrument is determined through a pilot study. A sample of 60 respondents, in Tamil Nadu was contacted and their responses were collected through survey method. The respondents were chosen on the basis of the years of operation and ownership status. Only those women entrepreneurs who have been running a registered firm for at least three years

and employing a minimum of three employees were chosen for the pilot study. This pre requisite is important to ensure respondents had sufficient experience and knowledge to respond better.

“Reliability is the degree to which a measurement is reproducible and not affected by transient assessment noise” (Shrout & Bolger, 2002). It is the “the extent to which a measurement is consistent and free from error” (Portney and Watkins, 2000; Bialocerkowski and Bragge, 2008). Before conducting a reliability analysis, it is important to purify the items (Churchill, 1979). The purification of constructs is done by observing the corrected item total correlation (CITC) score of each item and deleting any item with a CITC score of less than 0. Any item that shows a considerable drop in the CITC score is also deleted (Cronbach, 1951). The CITC score is a good measure of how well each item contributes to the internal consistency of a construct. The reliability is best indicated by the Cronbach’s Alpha (α) coefficient. According to Nunally (1978) an alpha score which is higher than 0.70 is considered acceptable. The present study follows this concept to ensure reliability of the survey instrument.

Table 3.3: Reliability of the constructs

Constructs	No. of Items	Reliability (Cronbach’s Alpha)
Opportunity competency (OPC)	7	0.722
Relationship competency (RC)	6	0.787
Commitment competency (CMC)	4	0.775
Organizing competency (OC)	7	0.796
Strategic competency (SC)	9	0.727
Conceptual competency (CC)	7	0.744
Learning competency (LC)	5	0.731
Familism competency (FC)	6	0.711
Emotional intelligence (EI)	16	0.800
Financial firm performance (FPSL)	6	0.780
Non-financial firm performance (NFPSL)	8	0.765
Entrepreneurial life satisfaction (ELSS)	8	0.737

3.5.3 Construct Validity

Validity can be defined as the extent to which an empirical indicator of a concept actually measures the concept of interest (Cronbach and Meehl, 1955; Anastasi, 1976; Nunnally, 1978). Validity is of three types viz content validity, criterion validity and construct validity. Construct validity, the complex one of the three can be defined as “the extent to which one’s measure of interest is related to other theoretically related concepts that are also measured”(Nunnally, 1978). This is ensured by convergent and discriminant validity. Convergent validity is the extent to which a trait is well measured by its indicators (Campbell & Fiske, 1959). It refers to the extent to which each item under a construct correlates with the rest of the items in the same construct. A higher inter-item correlation score thus implies that the items have a good convergent validity. Discriminant validity is the degree to which measures of different traits are unrelated (Campbell & Fiske, 1959). Confirmatory factor analysis is used to ensure the construct validity (Jöreskog, 1969). PLS SEM is carried out to fulfill the purpose.

Average variance extracted (AVE) is a measure of the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error (Santos & Cirillo, 2021). These Average variances extracted (AVE) values and their correlation coefficients are used to ensure the convergent validity of the construct. A latent construct is said to have acceptable convergent validity if its AVE is found to be greater than 0.5 (Alarcon & Sanchez, 2015). In order to examine the same Partial Least Square Method (PLS) using a Structural Equation Modeling (SEM) technique (Bagozzi & Fornell, 1982) is performed. The construct has good Convergent validity if the AVE of each construct is greater than 50 percent and composite reliability is greater than 70% (Fornell & Larcker, 1981; Diamantopoulos & Winklhofer, 2001; Rossiter, 2002). Following the above stated guidelines, the convergent validity is ensured. Table 3.4 shows the convergent validity scores i.e. AVE and composite reliability values for all the constructs. From Table 3.4 it is evident that all the constructs have their AVE values greater than or equal to 0.5. The composite reliability is also found to be greater than 70 percent. Thus, convergent validity has been ensured.

Table 3.4: Convergent validity of the constructs

Constructs	AVE	Composite Reliability
Opportunity competency (OPC)	0.504	0.814
Relationship competency (RC)	0.521	0.865
Commitment competency (CMC)	0.609	0.859
Organizing competency (OC)	0.560	0.853
Strategic competency (SC)	0.536	0.789
Conceptual competency (CC)	0.512	0.822
Learning competency (LC)	0.516	0.837
Familism competency (FC)	0.526	0.805
Emotional intelligence (EI)	0.574	0.838
Financial firm performance (FPSL)	0.503	0.857
Non-financial firm performance (NFPSL)	0.584	0.830
Entrepreneurial life satisfaction (ELSS)	0.572	0.807

Once convergent validity is checked and ensured, discriminant validity is checked. According to Chau (1997) a construct possesses discriminant validity when an item correlates well with the other items under the same construct than with the items under other constructs. Following the above guidelines, the square roots of the AVE values of the latent constructs are calculated for the constructs. The values are compared with the absolute value of the construct correlation between the latent constructs. As detailed in Table 3.5 the inter-correlations and square roots of AVE's exhibited no concerns with respect to the discriminant validity.

Table 3.5: Discriminant measure of the constructs

Constructs	Correlation Matrix and Square Root of AVE's (reported on diagonal)											
	OPC	RC	CMC	OC	SC	CC	LC	FM	EI	FPSL	NFPSL	ELSS
OPC	0.636											
RC	-0.126	0.722										
CMC	0.191	-0.133	0.781									
OC	0.443	-0.206	0.409	0.678								
SC	-0.036	-0.00	-0.085	-0.073	0.579							
CC	0.001	-0.010	-0.11	-0.031	0.057	0.642						
LC	0.038	0.023	0.282	0.282	-0.012	-0.009	0.718					
FM	-0.047	0.002	0.034	0.109	-0.023	-0.066	0.153	0.653				
EI	0.289	-0.166	0.309	0.414	-0.033	-0.040	0.218	0.268	0.524			
FPSL	0.147	0.586	0.079	-0.175	-0.036	-0.019	-0.071	0.040	0.022	0.707		
NFPSL	0.403	0.184	0.074	0.227	0.046	-0.054	0.386	0.294	0.332	0.113	0.620	
ELSS	0.216	0.100	0.521	0.142	-0.046	0.023	0.211	0.293	0.270	0.366	0.207	0.611

3.5.4 Criterion Validity

Criterion validity is the degree to which a survey instrument can predict the variable designated as a criterion. Coefficient of determination (R^2) is the percentage of variation in the dependent variable predicted by the independent variables. In order to examine criterion validity, the coefficient of determination is computed and if it is greater than 25% then the instrument has considerable criterion validity (Heiman, 1998).

Table 3.6 displays the R^2 value of the constructs with respect to the financial firm performance, non-financial firm performance, and entrepreneurial life satisfaction. Since the R^2 value of all the three constructs are greater than 25%, criterion validity is ensured. Warp PLS software is used to compute and determine the criterion validity.

Table 3.6: Criterion validity of the constructs

Construct	R^2 value
Financial firm performance	0.67
Non-financial firm performance	0.66
Entrepreneurial life satisfaction	0.25

3.6 SAMPLING AND TARGET POPULATION

Malhotra & Birks (2003) have advised that the target population has to be defined in the terms of elements/sampling units, sampling frame, extent and time. In the survey method, element or the sampling unit usually refers to the respondent from whom information is sought. A sampling frame includes all the units in the chosen population considered by the study. Extent denotes the geographical area covered by the study and time denotes the period in which the study was undertaken.

The objective of the present study is to understand the influence of emotional intelligence and entrepreneurial competencies on the firm performance and entrepreneurial life satisfaction of women entrepreneurs in Tamil Nadu. Goyal & Prakash (2011) note that the Government of India defines women entrepreneurs as “

women owning; controlling; having 51% share in the capital and providing 51% employment generated in the enterprise to women.” The population of the present study includes women entrepreneurs of Tamil Nadu, with at least 51% share in a firm; who have been running a microenterprise for at least three years and employing a minimum of three employees. The present study has obtained data from microenterprises in Tamil Nadu since most of women owned ventures almost 98% are micro in nature (International Finance Corporation, 2019). The Ministry of Micro, Small and Medium Enterprises, Government of India defines microenterprise as “an enterprise with investment in plant and machinery that is less than 1 crore and turnover of not more than 5 crores” (Ministry of Micro, Small & Medium Enterprises, 2020). Nevertheless, Micro enterprises are an effective instrument of social and economic development and are an integral part of planned strategy for securing balanced development of the economy (Sharma et al., 2012).

The present study has chosen to include women entrepreneurs registered with entrepreneurship promoting Organizations like Women Entrepreneurs (WE), Women Business Enterprise Development Association (WOBEDA), Women Entrepreneurs India (WEI), The Indus Entrepreneurs (Tie) and Women Entrepreneurs Welfare Association of Tamil Nadu (WEWA). Searching the public domain revealed that the above-mentioned associations were active, organize meetings regularly, cater to the needs of entrepreneurs and have chapters across the state except for WOBEDA which operates only in Coimbatore. These organizations provide paid and free service to the needs of women entrepreneurs spread across the State. These organizations are active, registered under the Societies Registration Act, 1860 India, promote women entrepreneurship, and organize regular meetings and other training camps for current as well as aspiring women entrepreneurs. Out of the 5164 women entrepreneurs registered in these organizations, 2542 entrepreneurs were found to satisfy the inclusion factors. The study adopted systematic random sampling. Once the list of respondents satisfying the inclusion factors were identified response was sought from every second member in the list. Out of the 1271 entrepreneurs targeted, 771 valid responses were obtained yielding a response rate of 60.67%. The present study chose to collect data through these organizations since they have member women entrepreneurs are registered and active participants in the events organized by these women entrepreneurs’ forums.

Inclusion factors:

- Women entrepreneurs in Tamil Nadu owning 51% share in capital
- Managing a firm for at least three years
- Employing at least three individuals

Sampling Method: Systematic Random Sampling Method

Time: January 2021- June 2021

3.7 DATA COLLECTION

Data collection is of prime importance since it adds meaningfulness to the theoretical framework of a study (Bernard, 2002). Primary data was collected using a questionnaire from respondents who satisfied the inclusion criteria and accepted to be a part of the study. The questionnaire was administered to them through online data collection forms sent to the email addresses. The respondents are given sufficient time to answer and reminders were sent to ensure their participation. Usage of online data collection forms ensured that all questions are answered and no form is incomplete. Data was also collected by administering hard copy of the questionnaires to women entrepreneurs in Coimbatore and the neighboring districts. The entire data is retrieved, consolidated and subjected to statistical analysis. The secondary data for the study is collected from journal articles, thesis available online, books, survey reports, newspapers, genuine websites and business magazines.

3.8 TOOLS FOR ANALYSIS

The Data collected is analyzed using the following tools and techniques. The tools and techniques are selected to satisfy the objectives of the study.

Percentage Analysis: This technique is used to calculate the percentage of respondents falling under each category. It shows the total frequency of respondent/respondents in the form of a percentage.

Descriptive Statistics: This technique is used to find the average of the responses for each of the constructs namely opportunity, relationship, commitment, organizing, strategic, conceptual, learning, familism, emotional intelligence, financial firm performance, non-financial firm performance and entrepreneurial life satisfaction. The

values computed help to assess the level of these characteristics possessed by the respondents

Correlation Analysis: This statistical technique is used to examine the association between two variables. The computed value “correlation coefficient” denotes the extent of association between the variables. A value of 0 denotes zero correlation and a value of “1”denotes perfect correlation. Ideally the value of the correlation coefficient lies between “0”and “1”. In the present study correlation is tested between all the study variables namely the opportunity, relationship, commitment, organizing, strategic, conceptual, learning, familism, emotional intelligence, financial firm performance, non-financial firm performance and entrepreneurial life satisfaction.

Regression Analysis: This statistical analysis method is used to describe the relationship between a set of independent variables and the dependent variable. In simple terms, it tells how change in the independent variable causes a change in the dependent variable. This technique is used in when the study involves modeling and analysis of several variables.

In the present study regression analysis is used to study the influence of

- The independent variables entrepreneurial competencies and emotional intelligence on the dependent variable financial firm performance
- The independent variables entrepreneurial competencies and emotional intelligence on the dependent variable non-financial firm performance
- The independent variables financial and non-financial firm performance on the dependent variable entrepreneurial life satisfaction

Regression for sub-groups: The regression for sub-groups is performed to analyze how the influence of the entrepreneurial competencies and emotional intelligence on the financial and non-financial firm performance differs with respect to changes in the demographic profiles of the respondents. This analysis technique helps to gain insights on how the relationship between the independent variables viz entrepreneurial competencies, emotional intelligence and the dependent variables viz financial, non-financial performance and entrepreneurial life satisfaction change with difference in

age, marital status, previous entrepreneurial experience, previous work experience and ownership structure of the respondents.

Path Modeling: The hypothesis framed by the present study is tested using Warp PLS Structural Equation Modeling (SEM) technique. This tool helps to assess the structural model and evaluates the predictive capabilities and the relationships proposed between the various study constructs (Hair et al., 2013; Rezaei & Ghodsi, 2014; Rezaei et al., 2016). It provides answers to research questions in a single, systematic and comprehensive manner. The statistical tool confirms the theoretical framework proposed by the study. It assesses the causation among the dependent and independent variables and evaluates the measurement model loading of observed items (measurements) on their expected latent (constructs). Structural equation modeling is a powerful statistical tool since it performs a thorough analysis of the proposed research model (Mitchell, 1992; Gofen, 2002). The present study uses the Warp PLS software to perform the SEM analysis. The path modeling is used to test the influence of entrepreneurial competencies and emotional intelligence on firm performance and entrepreneurial life satisfaction of women entrepreneurs.

ANOVA: The analysis of variance is most widely used statistical technique to test the significant differences in the mean values of more than two groups. This is used in cases of nominal scale items usually in the demographic part of the questionnaire. In the present study ANOVA is used to test the significant differences in the perception of respondents with varied demographic profile. The present study uses ANOVA to determine if difference in age, education, occupation of parents causes significant differences in the perception of respondents with respect to the study variables namely, entrepreneurial competencies, emotional intelligence, financial firm performance, non-financial firm performance and entrepreneurial life satisfaction.

T- test: This test is carried out in case of nominal questions with only two options. In the present study the test has been used to test if marital status has significant differences in the perception of the respondents with respect to study variables namely entrepreneurial competencies, emotional intelligence, financial firm performance, non-financial firm performance and entrepreneurial life satisfaction.

3.9 CONCLUDING REMARKS

The research study is descriptive and causal in nature. It adopts survey method. Content validity, reliability analysis, construct and criterion validity for all the study variables is ensured. The sampling frame constitutes the women entrepreneurs in Tamil Nadu who hold 51% share in the capital, have been running firms for at least three years and employing at least three people. The study adopted systematic random sampling for selection of the respondents. The various measures used to ensure validity and reliability of the questionnaire as well as the tools and techniques used for analysis are discussed. The following chapter presents the results of the data analysis in detail.