

**EUROPEAN DOCTORAL PROGRAMME
IN ENTREPRENEURSHIP AND
SMALL BUSINESS MANAGEMENT**

UNIVERSITAT AUTONOMA DE BARCELONA

Doctoral Thesis

**COMPETITIVE ADVANTAGES AND THE SMEs: THE
ROLE OF DISTINCTIVE COMPETENCES AS
DETERMINANTS OF SUCCESS, ARE THERE
DIFFERENCES ACROSS GENDER, SECTOR, AND SIZE?**

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November 10, 2002
Barcelona, Spain

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By

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A thesis submitted in partial fulfillment of the
requirements for the degree of

DOCTORATE IN “CREATION, STRATEGY
AND ENTERPRISE FORMATION”

**UNIVERSITAT AUTONOMA DE
BARCELONA**

Approved by _____
Chairperson of Supervisory Committee

Program Authorized to Offer Degree:

Date _____

ACKNOWLEDGMENT

First and foremost, I am especially indebted to Dr. Carlos Guallarte Nuez, my supervisor, and to Dr. Alex Rialp Tirado, for taking the time to lead me and supervise this research. Special thanks to my colleagues and close friends Dr. Robert Smith and Dr. Eileen Blau as well as to Drs Ana and James Ward for their genuine interest in my professional development and future. Not the least, my special thanks to Bob, Alex and Rino for their assistance, in the statistical analysis used for this thesis. I am indebted to those small business owners/managers who have shared with me their experiences. Without their participation, this research could not be accomplished. I would also like to thank many of the invisible people, friends, colleagues, and the many acquaintances from the University of Puerto Rico at Mayaguez who were always providing words of encouragement and help. Their contributions, regardless of how small, meant a lot to me in diverse ways. I am forever thankful to my children, Jaelle and Ryan Mann-Hamilton, for understanding the choices I made. Special thanks to my inspiration, my deceased father, Ezdra Hamilton and to my immediate family, including brothers, sisters, and my mother, Altagracia, for their understanding and emotional support.

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Abstract

This dissertation explores and examines, via qualitative and quantitative research methods, the competitive advantages and distinctive competencies that determine success in firms established in Puerto Rico for at least three years across sectors. The study embraces case analysis, in-depth interviews of successful and non-successful firms, and an extensive island-wide survey mailed to CEOs of established firms. Data was examined and analyzed using multiple statistical analyses; results were summarized and presented in table and graph forms. Moreover, a model of success was created with the intention of using it as a success guideline and failure deterrent.

Findings support the idea, within limitations, that the competitive advantages present in Puerto Rico's firms relate to other empirical findings. Results strongly suggest that success determinants across size, sector, and gender seem to be nearly the same, though, in the case of females, results show that women owners seem to possess less experience; their firms remain smaller; report more difficulties, are in areas less prone to grow, and under-perform. Findings also suggest measures for policy makers, bankers, educators, and lenders geared to increase programs oriented towards educating SMEs, as well as to stimulate current and prospective entrepreneurs to better cope with economic and cultural changes, and as a deterrent to failure.

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GLOSSARY

Key words: Resources, capabilities, core and distinctive competencies, competitive advantages, growth/performance, strategy, success, failure, marketing tactics, skills.

CHAPTER 1

INTRODUCTION, PROBLEM STATEMENT, GENERAL RESEARCH OBJECTIVES, AND OVERVIEW OF THE DISSERTATION CONTENTS

Know the other and know yourself: triumph without peril. Know nature and know the situation: triumph completely. Sun Tzu.

1.0 Problem statement

The importance of competitive advantage and distinctive competencies as determinants of a firm's success and growth has increased tremendously in the last decade. Practitioners and academicians have centered their studies on firm specific characteristics that are unique, add value to the ultimate consumer, and are transferable to many different industrial settings. Thus, it is understood that across sectors, most firms should recognize that attaining competitive advantages is the most challenging issue facing firms in the 21st century.

Firms, regardless of size, location, and type of economy in which it evolves need to face the overwhelming competitive phenomenon. Recognizing a successful competitive position has, therefore, become a challenge. For firms, facing up to these challenges is magnified by the globalization of businesses, the changing economic cycles, different economies of scale and scope, as well as the changing consumer preferences. While facing

* Sun Tzu : In a new translation of Sun Tzu's Classic " The Art of War," translated by R. L. Wing (New York: Doubleday, 1988).

these competitive challenges, some firms are able to face the various issues and problems

while others are not. Consequently, performance suffers.

Developed, less developed, and countries in the process of development have realized the importance of SMEs for their economic development and growth. This importance is magnified by the employment they generate and, the fact that many countries business policies (i.e., Puerto Rico, United States, Dominican Republic, Chile, and Taiwan, among others) include offices that handle small business affairs. Partly, SMEs importance is also due to their large share of the GNP, to their job generation capability (though no specific numbers are given), to the incursion of more women into the marketplace, and to the growth in self-employment, exacerbated by economic difficulties. A further reason is that most governments are saturated by their employment generation capacity and need a release. Moreover, and a current trend on many countries is for young professionals to incubate their own businesses while seeking economic independence. According to the Report to the President prepared by the US Small Business, in 1999 SMEs employed 68.2 million people or 58% of the private sector workforce.

Definitely, SMEs are also vital for the development and growth of the island of Puerto Rico. The sector helped contribute nearly 34% of the island GNP third after manufacturing and construction (Government Development Bank of Puerto Rico, 1999). Small businesses comprise over 48% of the economy and their activities in diverse sectors, i.e., (aside from manufacturing which is over 40%), services over 10%, trade over 14%, transportation, insurance and real state 12%, construction over 12%, all highly significant. The remaining percentage includes other sectors like tourism. Furthermore, the levels of growth reported by SMEs have convened governments to include the sector in their strategy design and economic development programs. Another example of the relevance given to the SMEs, is how the subject and the topics related are addressed in the yearly State of the Union (Report

of the President of the US and in the governor of Puerto Rico) report, a document that strongly advocates SMEs creation and strengthening. Sponsoring fairs, promoting investment, establishing chambers of commerce and offices all over the world to promote SMEs, also connotes the relevance of the sector. While there are positive actions geared to induce SMEs creation and maintenance, government policies still need to introduce more policies geared to induce accessible and less costly credit, as well as to establish increased support programs.

As the level of competitiveness and competence increases, also public attitude toward the sector, in terms of innovativeness, and support still needs to improve. Personal observations and readings on the evolution and problems facing the sector and their competitive phenomena, forcefully motivated carrying on research on the subject. Moreover, while implementing this research it became evident that, across countries, in spite of SMEs economic relevance, to date, more studies and statistics on the subject needs to be readily available.

To add to the inquisitive matter, reading about the incursion and growth of newly founded firms as well as statistics on failures, on many sectors, provoked even more the need to explore the subject matter. On the same venue, listening to complains and gripes about business problems across gender, to complaints on how businesses were affected by the incursion of larger firms, and about unfair governments policies, instilled more profoundly on this student the need to research on the causes of failure as well as on potential answers to these tribulations.

From the outset, a series of questions came to mind and the aim of this researcher was somewhat defined. However, as the course of studies progressed and research was

implemented, a clearer view came to attention. As such, this researcher delineated first her research aim and geared it to investigate and examine what determined success on some firms. Next, research was oriented at finding out what made some firms with similar resources grow and succeed where others did not. Third, focus was on analyzing why so many multinationals and foreign firms became successful and grew where many local firms did not.

Equally, listening to popular gossip made this researcher inquiry why consumers continue to prefer patronizing larger firms and not traditional local firms, in spite of common evidence showing that lower or lack of sales could cause the exodus of local firms, would affect job generation and the income of many native countrypersons. As a result of these queries, a larger concern surfaced. Why managers/owners sat complaining without taking a proactive attitude? Why not follow the example (not imitate) of larger firms and initiate researching the environment? Why not unite to seek solutions, and kick off some innovative changes in either product or service offer? Why not commence the usage of differentiated strategies to counterbalance their aggression and incursion? Since no immediate replies came to my attention, the sole decision facing this researcher was to delineate a research design, and initiate an investigative process. Because of these personal queries, the exploratory phase included to investigate varied secondary sources including literature, available private studies, and statistics. Later on, field research and interviews became the tools to obtain potential answers to these questions.

Thus, this researcher believes and has addressed the idea that businesses all over need to explore how their resources and skills can be transformed into competencies and competitive advantages that will position the firm in advantageous position vis-à-vis competitors. What's more, even though small businesses all over do not necessarily have the financial and monetary

resources larger businesses have, if service is personalized, and if regular updating in all respects is implemented, SMEs will remain in business with profitability. Moreover, Veciana (1999) affirmed that focusing on the firm internal competencies and strategic content has been found to be and will become a priority for businesses desiring to gain and hold an advantage over competitors¹ Other researchers like Aaker (1992) specify that drafting a strategy, defining how the firm chooses to compete, obtaining a sustained competitive advantage valued by the organization client base, and supported by skills and resources, will be the most relevant key to success in the future.

Based on the aforementioned readings, quotes, and analysis, a further dissertation goal was defined, to understand the basis under which small businesses incubate, establish, operate their businesses, and how the sector answers the challenges posited. Precisely, this thesis also seeks to also increase the researcher's understanding regarding which are the allocation of resources, competitive advantages, and distinctive competences possessed by local SMEs that determine success. Furthermore, this research seeks to analyze which factors induce success while focusing on understanding if performance is gendered and differs across sector and size. Following are the different concepts under analysis and how these are integrated with this researcher's position on the subject as well as the reasons for their relevance for this dissertation.

1.0.1. The role of resources, capabilities, and distinctive competences

The satisfaction derived from the products and services required by today's consumer, and the environmental changes pressuring firm's competitiveness, posit diverse challenges

¹ See chapter 3 for further explanations on the role of content research for firm's success.

and problems for all small and mid-size companies. The problems faced by small and mid-size firms bring up the question how can firms sustain the challenges they face? It is said that the way to sustain the challenge is by efficiently allocating resources, developing competencies and capabilities, and exploiting competitive advantages that will enable the firm to perform and deliver products and services better than competitors. Also, it is mentioned, across professional circles and popular literature, that since successful organizations possess capabilities that allow them to perform exceptionally well, if firms want to compete successfully they are also forced to develop their competencies and capabilities more effectively. Why? Precisely, because small and medium size businesses appear to lack many of the economies of scale and scope those larger businesses have. Therefore, SMEs need to compete in specific niches, offer personalized and specialized flexible services, and develop or prolong their reputation and network advantages. This brings to wits several questions, which is the relative impact of industry versus firm-specific effects on performance? What is the role of capabilities? Which are the firm's internal determinants on performance? And, what is the managerial value in the decision-making process and ultimately on success?

With the intention of clarifying concepts discussed and to provide answers to the questions posited in this research, the next paragraphs present some terminological definitions of what resources, skills, capabilities, competencies, and competitive advantages are. Besides, an explanation on how these terms relate to each other and to the objectives of this thesis is presented. Moreover, introducing these clarifications is also due to often-conflicting interpretation of the terms. The concept of competitive advantages and the role they play on firms performance will be dealt with separately.

Resources, to Wernerfelt (1984:172) are all those tangible and intangible resources that are semi permanently tied to the organization. Example of this are brand names, technological knowledge developed by the enterprise, reputation, as well as qualified personnel, among others. The aforementioned form the basis of competitive advantages, and comprise three distinct subgroups: tangible assets, intangible assets (Itami, 1987 and Aaker, 1989), and capabilities. Tangible assets refer to the fixed and current assets of an organization, which have a fixed long-run capacity. Examples include plant, equipment, land, other capital goods and stocks and deposits. These assets are easy to measure, transparent (Grant, 1991), and relatively easy to duplicate. On the contrary, intangible assets have relatively unlimited capacity allowing firms to exploit their value (e.g. license, patents, reputation) or sell them like brands (Wernerfelt, 1989).

Capabilities often have been found, by many researchers, difficult to delineate, and often are described as invisible assets (Itami, 1987). In essence, capabilities are understood to encompass the skills of individuals or groups as well as organizational routines and interactions through which all the firms resources are coordinated (Grant, 1991). They are the root and source for developing distinctive competencies. Examples of these are teamwork, organizational culture, and trust between workers and management

Skills are highly relevant to any organization and their importance is tremendous; they are inimitable and non-substitutable. Since capabilities are interaction-based and difficult to duplicate, the RBV literature favour developing capabilities as a strong source of sustainable competitive advantage (Collis, 1994).

Competencies, from a definitional standpoint are often related and appear equated to capabilities. This term often is used interchangeably with skills. Authors like Fahy (2000), among others, believe that the terms could be better understood if the label “term” resources antecede the words. Competencies are also understood as unique skills and activities that a firm can do better than rivals Lado, Boyd, & Wright (1992), then, SMEs success might reside on the capabilities developed.

Competitive advantages (CA). Finding a clear definition of the term is rare (Fahy 2,000:96), yet often the concept is used interchangeably with distinctive competence (Day and Wensley, 1988). From a definitional departure, CA refers to a relative concept and is the advantage one firm has over a competitor in a given market, strategic group or industry (Kay, 1993).

To add to the matter, when analyzing SMEs, it is understood that firms that support a market position that is valuable and difficult to imitate, in a cost efficient manner, will succeed and potentially sustain advantages and competencies. However, if no competencies are found to exist, then firms should develop and nurture them in order to stimulate efficient performance by small firms. Identifying competencies existent in Puerto Rican firms is thus a

pervasive goal for this dissertation. Authors such as Love and McGee (1999:1) affirmed that to remain competitive in markets increasingly dominated by large discount chains, merchandisers, and “category killers” small independent retailers need to develop distinctive competencies. The same elocution can be done regarding services: i.e., insurance, consultancy, et al. Thus, a need exist not just to device internal systems for firms to adapt to a changing environment and to foresee changes, but also to select strategies that can ensure higher levels of competition, sustainability, and the profitability that will ultimately enable firms to succeed and grow, not just to survive.

1.0.2. Competitive advantages as determinant of success

The importance of competitive advantage has increased tremendously in the last decade. Practitioners and academicians have centered their studies on firm specific characteristics that are unique, add value to the ultimate consumer, and are transferable to many different industrial settings. Thus, a firm can have “n” advantages over another, example lower cost structure, lower level of wages, and superior customer service. Currently, the most relevant advantages are those oriented to perceived customer value. A recognized example is Walmart’s sustained competitive advantage. This corporation, a relatively new competitor if compared to Sears and JC Penney, has succeeded in many aspects including product guarantee, lower prices and its excellent distribution system. Of interest to this researcher is if the advantages projected are sustained or not.

Sustained competitive advantage is a term used amply today. The introduction of this word departs from the concept competitive advantage, a concept that was attributed to Barney (1991), even though Schoemaker in 1990 tied it to strategy achievement and Grant (1991) popularized the term in the United States. Regardless, both terms refer to the same

concept. It refers to how the competitive advantage is extended or duplicated, and also to how advantages do not necessarily extend for a period of time nor persist indefinitely. As such, for an advantage to be sustained it cannot be imitated, must be difficult to attain, must be rare, valuable, must be a source of above average profits, and superior performance, measured in conventional terms such as market-share and profitability. At this juncture, economic literature provides an explanation that makes logical sense. The former holds that given strong competitive pressures, high rationality will prevail and economic rents will dissipate. In addition, when the resources underlying the advantage are limited or quasi-limited in supply, superior returns will persist (Peteraf, 1993). As such, firms will focus attention on the nature of the firm's resource pool.

As was noted above, for a competitive advantage (CA) to be sustained and for the firm to obtain above average returns valued to customers, CA is and will become and even stronger area of firm's strength in the future. Barney (1991) reported that, for a resource to be a potential source of competitive advantage it must permit the firm to conceive or implement strategies that will improve its efficiency and effectiveness by measuring the needs of customers. This also means that resources need to meet other conditions, and that there are complementarities between the resource-based view of the firm and environmental models of competitive advantage (Barney, 1991; Collis and Montgomery, 1995).

Summing up, Peteraf (1993:185) concludes that four conditions need to be met for a firm to obtain competitive advantage, and even more, to sustain that advantage and obtain above average returns. First, resource heterogeneity, which could create rents, should be developed. Second, *ex-post* limits to competition should be present so the advantages obtained could not be competed away. Third, imperfect factor mobility should be developed to ensure that valuable factors remain with the firm so that rents are shared. Lastly, *ex ante*

limits to competition should be attained in order to keep costs from offsetting rents. Peteraf also clarifies that though all conditions are very important, they are distinctive and autonomous. Consequently, the most basic condition is heterogeneity, which is considered the *sine-qua-non* of competitive advantage.

1.0.3. Strategic success determinants

Unanimously, most theoretical researchers, practitioners and empiricists agree that the success of the small business segment is crucial to both the stability and health of the world economy. As the economy worldwide has shown diverse cycles (ups and down), studies have focused more profoundly on finding out which are the success determinants that in the long run will allow firms select the resources, utilize capabilities, and develop skills that will instill success. Throughout literature, it is said that there are three ingredients critical to a firm's strategy and success:

First, the strategy must be consistent with the conditions underlying the competitive environment.

Second, the strategy must place realistic requirements on the firm's resources and

Third, the strategy must be carefully executed (Pearce & Robinson, 2000).

If firms aim to succeed, they need to define the course of action to follow and select the most suitable strategy. Economic results and statistics of success and failure of small and mid-size firms seem to signal a need to define such a strategy. It is this researcher's feeling that the best avenue for success continues to be determining which are the competitive advantages and distinctive competencies exhibited by SMEs as well as analyzing which of these competencies found determine success across sector, gender, and size.

Accordingly, the scenario of business makes development of competencies and competitive advantages not only desirable factor, but also paramount for the future survival and success of enterprises. Many reasons attest to this need: the changes in consumer's preferences and dynamics, the changes in customers demographics as well as varied consumer 's purchasing patterns. These reasons, among others, makes it mandatory for firms to be competitive and to counterbalance the problems posited in their environment. In addition, firms need not only to possess, project and exploit their resources, capabilities, and competitive advantages, but also to make the most of their distinctive competencies (Grant, 1991; Hamel and Prahalad, 1994) to implement effective strategies.

Researchers like McGee and Love (1999:85) have asserted that limited empirical research exists that identifies which specific organizational resources and capabilities exist or should be developed in SMEs to project competitive advantages and prevent failures. This, they found to be a common occurrence in most SMEs. In the case of Puerto Rico, research on the subject is almost nonexistent. As such, this study will fill a vacuum. The present study will envelop not just empirical research, but will extend further, to include theoretical perspective, theoretical reviews, extensive interviews and surveys of successful and non-successful firms directors and CEO's. Statistics from private and governmental will be included to support findings.

Moreover, while the competitive environment keeps increasing exponentially, the external environment adds more pressure to firms. Due to our growing economic instability, to increased government fiscal measures worldwide, in the United States, and Puerto Rico, new systems are being devised to stimulate an economy that has weakened since June 2000.

Nonetheless, no improvement on the overall situation is foreseen in the short time² even though hope of such undertakings is latent. This, in spite of lower interest rates geared to stimulate the economy, of larger investment in advertisements, and of improved services that have become more noticeable to the firms publics (clients, suppliers, etc).

1.0.4. What determines competitiveness?

Competitiveness and learning how to compete resourcefully continues to be the major issue in the 21st century landscape. Irrelevant of the markets the firm seeks to compete, the future appears to be unstable and challenging. Regardless, if a company aspires to obtain success and leadership beyond in their current and prospective markets, their directors must understand that the world economy is changing at an ever more accelerating pace. New and faster product introductions and designs are brought into the market, more emphasis on costs and lower price offers is seen, and personnel cutbacks is widespread. These measures are instilling firms to become leaner with its corresponding negative effect in consumer consumption patterns. Ultimately, though, savings incoming from these proceedings are expected to pass on to consumers and arouse expenditures.

Additionally, the competitiveness phenomena exist at country level and at global level, and understanding and reacting in such direction, has attracted the attention of public and private sector, governments, and researchers. Lending institutions have also focused on the subject. To add to the matter, seeking to compete at global sphere, many firms are not only seeking cost efficiencies, but even more relevant, are forging alliances, mergers and diverse growth and diversification strategies to increase their competitiveness. Thompson

² A review of economic indicators and the pervasive socio-political events in our environment have strenuously affected the economic spectrum. Previously our economy, which is closely linked to that of the United States, evolved from any stage rapidly. However, the expected recuperation has not occurred this time, yet.

and Strickland (2001:ch. 2) affirm that, constantly, many countries are opening their borders to foreign firms; geographic distances are becoming less significant, and that growth oriented companies are racing to stake out competitors.

This contention reaffirms the increasingly growing belief that in order to compete in the world economy demands that firms are bold, offensive, ready to carve new niches and market positions, and, also, need to design potent defensive strategies to protect their positions. Likewise, these authors³ propose that there are many issues firms will need to face in order to understand how, what determines, and leads to success, i.e., differences in cultural, demographic, political, legal, and market conditions. This researcher concurs.

1.0.5. Significance of SMEs for the economy

The globalization of the economy, with the changes brought forth, the growth in competition and the environmental changes, position additional challenges for some small and mid-size companies. Businesses, as such, need to respond to greater global imperatives and challenges. One way to do so is by understanding the challenges to be encountered and to recognize the potential and actual contribution of small and medium-sized enterprises (SME's) in the global economy. Asundi (1996) specified that the challenges facing firms located in Puerto Rico are largely more significant because of the island geographic location and its small domestic market. Firms located in a small island of only a little more than 3.9 million inhabitants (Population Census 2000) with per capita income of less than \$9,000 US dollars, high business density, and high unemployment levels have more challenges and

Businesses, in lieu of these changing economic cycles have been confronted with the prospect of having to reevaluate their strategy, investment portfolio, and operations.

³ Thompson and Strickland (2000) ideas go even further, they propose specific actions to compete in the world sphere. See chapter VI of Strategic Management concepts and cases pp 200-240.

pressures, on all angles, than those located in areas of larger populations.

The importance of small business (SB) for the economy has been repeatedly asserted by statistics from both the Small Business Administration and by the government of Puerto Rico. Using the definition of the United States of America, small businesses are firms with one or fewer than 500 employees. Thus, 99 percent of the 21 million entities filing a business tax return in the US are small businesses. Consistent with these findings, nearly half of the small businesses have been found to have fewer than five employees, while 90% have less than 20 employees (about 70% are sole proprietors).

The small business sector is also very significant and relevant for the world and the local economy. As such, they need to be nurtured. Despite the fact that, throughout the years it has been commonly believed that larger firms contribute the most to the economy, this opinion has been shattered. Statistics from many sources shows an impressive growth for small and medium-sized firms. Many published sources attest to small firms impact in a country's economy. Historically, small businesses have exhibited a progressive increase in the number of jobs created (as stated in a report prepared by Dun and Bradstreet for the House Small Business Committee updated in January, 1999) and in generating self-employment. Following are specific statistics draw attention to the relevance of the sector.

Small firms in the United States, from 1990 to 1996, according to the Facts About Small Business: (Office of Advocacy, 1997: 1-5) have created over 2.6 million new jobs. Out of this 1.5 million came from expansions of new small firms with 0-4 employees.⁴ In addition, the same source reports that SMEs in the US employ 53% of the private workforce contribute 47% of all sales in the country and are responsible for 50% of the private gross domestic product.

According to Ponthiew and Insley (1996: 35) this sector constitute 97% of all businesses and employ more than 53% of the labor force. In addition, Doyle and Wong (1996) also found that small companies produce 24 times more innovation per

⁴ 1997 report from the Office of Advocacy showed that firms with less than 500 employees produced 2.5 million new jobs.

research dollar than do large businesses. The United States Bureau of Labor Statistics reported that 71% of future employment in the nation's fastest growing industries (health and business services) is likely to come from small firms.

It is expected that small-firm dominated sectors will contribute to an even larger share of new jobs for the 1994-2005 year. Moreover, statistics show that about 60% of new jobs will arise from this sector while large firms will only contribute 15%. Still, there are conflicting statistics about the exact contribution of small business to the economy and numbers vary slightly depending on the source. Nevertheless, US government sources, including the Small Business Administration and the Census Bureau continue to be a very reliable and significant source of information.

Small businesses in Puerto Rico⁵, like those in the US and the world, have kept growing at an impressive rate in spite of the existent high competitive levels, as reported by the bulletin from "Banco de Fomento", (2000), a Puerto Rican government official bulletin. The significance of small business in Puerto Rico is tremendous as the next paragraphs illustrate.

Statistics provided for 1995 by the County Business Patterns (a publication of the Bureau of the Census), reported that physical business locations on the island, were 38,832. Of these establishments 37,818 had less than 100 employees (97.4%), and 23,314 had less than 5. However, by the year 2000 local businesses had obtained higher growth. Small businesses, according to *The Caribbean Business Newspaper* (2000:22)⁶, published that SMEs surpassed the 100,000. The sector also generates 63% of all the new jobs and 48% of Puerto Rico's gross domestic product⁷. This is an impressive growth rate. The "Administracion de Fomento Comercial", Office of Planning (the main government statistics center) reported that for the year 1998 the estimated commercial establishments on the island summed up to 106,658, business between small and medium sized businesses.

In Puerto Rico as in the United States mainland, the expected trend is that most jobs will draw from SMEs, according to Small Business Administration (SBA, 2000) reports. Nevertheless, many of these businesses are micro enterprises, and satellite construction firms, many of which do not surpass the 2 years mark. Moreover, the SBA released data (September, 2000) and published statistics showing that 95% of all businesses in Puerto Rico employ less than 50 workers, and 60% of them have one to four employees.

Furthermore, as of mid 2000 the small business sector was very strong, in spite of the number of reported business failures. In addition, the same source informed that

⁵ It might be noticeable to the reader the inclusion of United States statistics joined to that of Puerto Rico. Mostly it is due to the fact that Puerto Rico is a US commonwealth and funding for most programs comes from federal grants and aid.

⁶ A reputable English language business newspaper published in Puerto Rico.

⁷ Source: the United States Census Bureau data and a 1999 study by research firm "Estudios Técnicos."

businesses had a 10-year period of sustained growth compared to 1990. This included a gain in retail sales of more than 45%, a more than 5% annual growth. The significance extends to job creation. According to a Commerce Department Administrator, small retail and service sectors created two jobs for every other job created in manufacturing. Growth in the sector was 56% higher than the total growth on the island.

In spite of this impressive record of accomplishment, locally, small firm research still lacks a theoretically grounded understanding of the factors underlying small businesses success or failure in general, and the problems facing businesses located in the Island of Puerto Rico, in particular. Constantly, local media publishes reports stating that the local market is too small, that sales are low, and that consumer's expenditures are down. Since these publications impact consumer's minds and attitudes, we need to posit the question, why do we consent to so many large firms entering the market? Why this "megastores" and multinationals keep growing in size and sales, and our local firms do not? Why new firms emerging daily capture the market fancy with diverse service offering? The observation of this competitive behavior makes this researcher reinforce her opinion that local companies in particular and SMEs in general need to rethink their strategies. It is assumed that many firms, in general, and small Puerto Rican firms, in particular, lack many of the competitive advantages needed to face challenges. The question posited is how can a model be created to guide established firms or firms entering the market to perform adequately or succeed?

1.0.6. Why some business fail and others succeed, is management the reason?

There is a strong imperative for businesses regardless of where their firms are located, to respond to global pressures in order to succeed. It also does not appear to be quite clear what is the difference between a successful and non-successful business. To this researcher, there is a difference. In essence, the differences in resources appear to be small but differences in results due to managerial, analytic, and decision-making choices are

tremendous. For this thesis, as well as the position of some authors, the differences in managerial styles are ultimately specific reasons for failure and success. Some of the reasons attributed to failure are poor management, and a poor management team. Argenti (1976:3), an early leader on the subject, expressed that “while everyone agrees that bad management is the prime cause of failure no one agrees what bad management means nor how it can be recognized, except when the company collapses, then everyone agrees how badly managed it was”. As such, researchers like Lussier & Corman (1994) found that the difference between a successful and failed business is dependent on the firm managers/ owners having access to capital, management experience or skills.

Additional studies specify that businesses that plan tend to be financially sound. What's more, some studies also found that firms whose owners had earlier experience at business founding do not tend to fail. However, a study by Hamilton (2000), found out that some businesses that initially planned (at least mentally), had experience, and were initially successful found themselves in trouble when the environment changed, when competition increased, and when the industry in which they started changed. Many of these firms restructured, some survived, but most, later on failed.

1.0.7. Do all businesses that falter fail?

Generally, and research attest to this affirmation, not all businesses that falter fail. A failure is regarded as a bankruptcy with losses to creditors. Those who submit to United States chapter 7 are failing business. Often, some businesses submit themselves to chapter 11 (business restructuring) to protect themselves from excessive expenditures, lack of financial control, or from enormous debts. This is the case of many firms in our environment

including the third retailer in the US, Kmart⁸. Previously, many of the businesses that entered bankruptcy procedures survived, as was the case of Continental Airlines in the U.S. The aforementioned exemplified firms, which after filing for restructuring bounced back and recuperated successfully⁹. For this dissertation purposes, examining the reasons for failures is as relevant as determining the factors that instill success. Likewise, finding out breakdown provoking factors will serve as a sustenance mechanism geared to elucidate and more profoundly understand the relationship between firm's success and demise.

Even though literature asserts that most studies are oriented toward failures than successes, some researchers also study success. Actually, Gaskill, Van Auken, and Manning (1993), among others, found that the same reasons reported as causing failure appear as factors affecting success on opposite ends. Precisely, this research seeks knowledge about which factors determine success and/or effective firm performance for both successful and non-successful firms across gender, sector, and size.

A good number of researchers have reported that success is normally related to strategic issues, which include strategic tools used by the business, to owner entrepreneur demographics and to the demographic characteristics of the business. These findings have been validated by studies by Shonesy and Gulbro (1998:) and are used as focus for this thesis. Indeed, the two sets of authors mentioned above point out that failure data must be analyzed to indicate how they can be translated into survival information. Moreover, to most, failure and success are bound together, even though at opposite ends of a continuum.

Moreover, on the specific case of Puerto Rico, an increasing number of SMEs on the

⁸ In the year 2002, economic downturns have forced the number 3 retailer to submit to chapter 11 procedure; the main reason given was not being able to face the challenges of competition.

island have filled for both chapter 7 and 11 of the US bankruptcy code. Filing for bankruptcies might be a concerted answer to the lack of competencies exhibited by non-successful enterprises. But the underlying reasons could be different. Commonly, it is mentioned that failure in our market is due to overspending, rapid competencies developed by successful enterprises. However, the underlying reasons could be uncontrolled growth, and delegating operations to inadequately trained employees, unsupervised, and inadequately compensated personnel. It seems that, failures are also attributed to the fact that many owners lack the ability to confront the increased level of competitiveness existent today. It is this researcher's hope that by answering this queries she might be able to elucidate what causes failure, how to restrain firm's demise, and to devise a model geared to hearten success across sectors.

Ponthiew and Insley (1994), informing on a study done by MacMahon, Holmes and Hutchinson (1993) in the United States, pointed out that business failures during the first three years of a start-up was about 50% for new businesses and 20% for businesses within two to ten years of being founded. From an economic perspective, business failures are difficult. High levels of failures create unemployment, create emotional distress and, if not balanced with other job creation activities, may lead to recession, in some cases.

Partly, this researcher assumes that a large number of traditional local small micro and medium size businesses fail because they do not possess the advantages sought after by the new breed of consumers. Therefore, sales level suffers, return on investment (ROI) diminishes, and inventories accumulate and, worse than anything, customer service, in most firms, are not kept up to par. As a result, failures are increasing at disproportionate rates.

⁹ At $\frac{3}{4}$ of 2002, the scenario of business is changing further either for political or economic reasons, as well as speed and innovativeness in which the world competitiveness is changing.

Which brings about the need to answer some questions: What can be done to revert the process and increase success? Which are the problems faced by SMEs? A recently published article (Caribbean Business, 2002:12) stated that compared to 2001 the number of bankruptcies in the island diminished yet the public debt increased. More¹⁰ importantly, the same article also included that chapter 7 bankruptcies increased in a larger proportion¹¹. These figures can change quarterly.

To add to the problems, however, some uncontrollable variables have surged, and other trends have arisen: the environment of business has become more insidious, more women with higher levels of education are entering the market with new businesses, and younger groups also educated are forming aggressive start-ups making older firms outdated. In spite of these, many women business owner perceive biases against them. Certain groups blame government policy, which they believe has changed and allowed a “system of multiple locations geared to let competition take its course”. This events allure to the fact that, locally, any firm eager to enter the market can, regardless if establishing this firm means saturating the market, violating location, density, and not implementing any feasibility studies. This governmental posture has worsened the scenario of competitiveness. Meanwhile, and abundant number of new shopping malls have been built in the peripheries, offering relatively new services (including mail catalogues) and convenience as well as new products, thus further defeating long-established retailers that are unable to cope. Consequently, the new service offerings and benefits received from enriched services, which traditional SMEs do not offer, have caused stiffer competition and enlarged the gap between

¹⁰ The year 20001 had a revised number of 14,376 cases instead of the 14,891 reported in 2000. Negative indicators were that chapter 11 (reorganization) filings were a 54% increase compared to 2000. The total amount of debt reached \$1.2 billion, 23% higher than the year 2000 which amounted to \$917 million.

¹¹ Previously feasibility studies (need and convenience) were required to avoid market saturation. The opposite occurs today.

successful and non-successful firms.

1.0.8. Does business performances differ when managed across gender?

Differences on performance across gender have been studied throughout many years but more intensively in the last two decades. Some researchers and practitioners assert that there are no differences across gender except those brought along by choice. Others perceive a concerted effort by the public and private sector to continue discriminating against women, in spite of laws against such actions. Differences across gender have been attributed to diverse factors, human factors such as owners' education, firm characteristics such as the type of business, and to weaker management patterns of women versus men, entrepreneurs' traits. Other studies attest to few differences between the personalities of men and women while other have found different management practices across gender.

It is the feeling of this researcher that gender differences do continue to exist and, even though, legally women have the same rights as men, society, and individual choices have prolonged the differences. As such, this study seeks to delve into the subject, will try to establish if this discernment continues, what causes it, while incisively searching for avenues to change such perception. Economically, and considering the growth and education of women versus men, (United States Census, 2000), and due to the increasing incursion of women in businesses, there is an ever growing need to study if there are differences on performance across gender. Even further, it is necessary to also tie success to the size of business and gender. Studies by Hisrich, Brush, Good & DeSouza (1997) illustrated that SMEs, in general, and women owned businesses, in particular, are of increasing importance to the US and world economy, given their revenues, the number of employees recruited, and the self-employment generated. Statistics on the incursion of females onto the business world changes the landscape absolutely.

Moreover, there is a significant growth in all areas of professions, specially the non-traditional women-owned business sector. In 1997, there were 8 1/2 million women-owned businesses, these accounted for over 1/3 of all businesses and generating \$3.1 trillion in terms of revenues. As compared to all small businesses, women-owned businesses have grown by 89% over the past decade in the US. Their revenues increment was 209% over the same period (United States, Small Business Administration, 1998). In Puerto Rico, the growth of professional women in all spheres of life is rather noteworthy, especially on the business field.

Despite this wide-ranging contributions, small firms studies in Puerto Rico, particularly those harmonizing performance of women-owned businesses as compared to men, and studies seeking to establish if differences or similarities exist, based on the utilization of distinctive competencies and advantages across gender, are non-existent. Local statistics (Fomento's office, 2000)¹² of women in the labor force, indicate, that 1/5 of all working mothers that have children under 18 works part-time. What's more, the same source reports that 53% of the able populations are women. Undeniably, associations have lately started showing interest on women owned businesses and have included and recognized women-owned enterprises on their lists of thriving enterprises. This decision presents potential statistics for business creation. Yet, still, on the island, as observed and published by raw government statistics, women-owned businesses are typically smaller, less resilient, have higher difficulty in accessing credit, are less informed, and appear to exhibit a lower survival rate. Why these problems are happening in a growing, protected, and legislated economy is a further avenue to justify this research.

¹² Fomento is the government's official office designated, among others, to gather statistics that could be used

1.0.9. Performance indicators of success

Many indicators have been used as measurements of performance, regardless of gender and size. For this research six main measures and two lesser measures of success are used: 1) strategy used and goals compliance 2) trends in annual sales in dollars, 3) growth in terms of employment, 4) self reported return on equity (ROE) and 5) return on investment (ROI), 6) number of years in business. As a lesser measure is a) establishments and return on assets (ROA) and the b) the self reported comparison of the firm's position versus other firms founded at the same time, and on the owner's self perception of success.

For purposes of this research and in order to adequately probe the hypothesis underlying this research, respondents were contacted via a quantitative instrument, which was used and tested to measure performance. Analysis were implemented and frequency tables and cross tabulations were done. Further on, a model of success using SAS and Prinqual was designed. After testing, a priori, the correlations among significant variables, as per literature, 10 variables were considered significant for the study and used to compare findings for each firm at a 5% level of significance.

1.0.10. Empirical and theoretical problems

This research has been designed not only with the intention of complying with the requisite of a thesis, but also with the interest of genuinely finding out which are the competitive advantages, distinctive competencies existent and/or needed in SMEs to determine success, as well as analyzing if success differs across sector, gender, and the size of firms. Furthermore, the chosen topic seeks to help increase understanding of the traits that make some firms succeed. Secondly, the goal is to use the results to design a model that

for promotional purposes and for attracting funding

could be use as guidance and preventive measures for failure. Of similar interest is the researcher's desire to learn why, even though a large percentage of women incursion in the business world and have shown diverse degrees of success, the size and earnings from their business does not appear to be as large as those of men. While seeking to attain this goal, this dissertation also gears to understand why some firms are able to succeed in diverse economic cycles while others fail, which is also the opinion of Garnsey (1996).

Despite the widespread practical and academic interest in small firms success and overall economic performance, theoretical, empirical and practical public studies on firms and the issues affecting them, especially those established in the island of Puerto Rico do not exist. Locally, it is a known fact that in the case of Puerto Rico no documented public studies exist on SMEs that might show if differences across sectors are just locally embedded or if they are intrinsic in nature to businesses elsewhere. Existent local studies are of private nature, corporate contracted and government reports, mostly on failures. It is, however, very complicated to get a hold on them. This study seeks to unearth the existence of the factors described and, to utilize the findings not just to comprehend and weigh these results against other studies and culture, but also to employ these outcomes as a preemptive measure and achievement motivator.

1.1. Problem statement

The following statements refer to the various significant problems this researcher Observed throughout many years in various scenarios either in the business environment, in real practice, and in publish media, not only of the island of Puerto Rico but also in other countries. Because of this accumulated queries, even before starting her graduate studies, she had felt the need to inquire into on the subject more profoundly. As such, this dissertation at

starting point precisely considered each of these problems paramount.

1) Small and mid-size businesses, especially traditional firms, have found and are finding it difficult to compete on a daily base. Commonly, difficulties are attributed SMEs smallness, and to traditional small businesses not changing their traditional way of doing business, nor have revised their competitive approach. Consequently, these firms are unable to face new entrants, which tend to be more creative, incubate better ideas, and have higher networking skills (Johannisson, 1998: 310) than the traditional firms (this ideas were initially presented in Johannisson and Peterson,1994). Nevertheless, the scenario of business worldwide and locally is much more complex. Not only businesses are facing increasing competitive pressures and changing consumer dynamics, but they are also finding diverse economic activities that make attaining goals complex.

2) The dynamics of changing demographics and consumer purchasing patterns, coupled with stronger competition, are putting increased pressure on businesses wherever they might be located. The entrance of multinationals, of large merchandisers, and discount chain stores have threatened traditional businesses in general and retailers in particular. To these problems are added others such as the high costs of space, the need to invest certain amounts in advertising and training, the lack of R & D, and major problems of lacking economies of scale and competitive costs structures.

3) The resilience of long established businesses to compete, to change, solve and cope with their many problems, and extend their life cycle have worsened and have become, significantly, a deterrent to attain success. On the island, some traditional retailing and service firms have resisted to changing their traditional ways of doing business, becoming, as such, obsolete while new entrants (local and foreign) are more creative and have higher networking skills becoming, thus, more successful. As a result of this lack of action and

reaction to market changes, a substantial number of businesses are going into different bankruptcy proceedings. All these problems, however, have not diminished the economic significance of SMEs.

4) Changes in product design, in service offering, in regulations, besides consumer preferences, have placed tremendous pressures on the management and development of the island's small and medium size enterprises (SMEs). This might be due to a perceived lack of innovative skills and vision as well as the neglect to update their strategy. Whichever the reason, the negative effect appears to be omnipresent and has cost many firms their competitive advantage. These concerns have been analyzed from earlier times by many researchers such as Bruno, Leidecker & Harder (1987) who posited that changes created by lost competitive advantages are and continue to be more profound than seen, and need to be analyzed deeply in today's 21st century landscape.

5) The increased competitiveness faced by small firms on the island due to the entrance of larger multinational firms and "category killers"¹³ with broad economies of scale which continue penetrating the market, are making competition a more pervasive and insurmountable problem. Thus, causing that the ability local firms have to identify and exploit opportunities in the market diminishes. Contrary to most local firms, foreign firms operate on economies of cost and scale, hire experienced management and invest heavily in marketing. Local SMEs, on the contrary, tend to operate in traditional ways, are run by owners with traditional education and devote all their time to operate and oversee all firms' activities. Often, time scarcity inhibits these owners vision, R&D, planning, and innovative skills. The opposite occurs in large stores and corporations; owner (s)/CEO's hire day-to-day

¹³ "Category killers" are specialized firms that after observing market needs serve it at an advantageous cost advantage. Examples are Kmart and Walmart corporations.

managers allowing themselves, as such, time to seek new growth avenues and to further develop their business.

6) The location and physical infrastructure problem becomes a very significant issue. Most small local firms are located in small premises, often without air-conditioning and in the centers of city without additional facilities like parking space. Observing the neglect, exodus, deterioration, and abandonment of most traditional areas where SMEs are typically located. Traffic and lack of parking facilities, lack of air conditioning and weather protection, lack of adequate lightening and innovation, not to mention unappealing ambiance makes patronizing most SMEs unappealing to new trend consumers. To counterattack new stores are more appealing, provide more ambiance and physical facilities, open extensive hours, offer credit and offer a variety of services not provided by traditional stores. Modern innovative consumers often prefer “malls” and discounters to stores situated in traditional business districts. This happening makes it even more imperative to study what makes firms competitive and to infuse in them a desire to innovate and renovate. Marketing professionals (Doyle, and Wong, 1996: Kirby and Siu, 1998, and Kotler, 1994) have asserted the need for studies of such nature. Kirby and Siu (1998:40-60) reported that there has been ample neglect on implementing specific studies on SME’s competitiveness, including the non-usage of innovative marketing techniques.

7) From an economic standpoint, the declining economies faced by firms worldwide, since the middle of the year two thousand, is causing further erosion and competitive pressures for firms to succeed. This has caused that rather than seeking avenues to acquire support from all sectors, acquire more resources and develop capabilities most

firms cry foul. Actual and potential unemployment is making most consumers cautious with its concomitant repercussions, and firms, more than ever before, are competing on prices rather than services, adding, as such, value to consumer's perceived goals. As a consequence, most firms, regardless of size and country of origin, are seeking ways to revise their strategy and resource allocation, as well as updating their environmental scanning system so as to select the most suitable avenues to enhance their profitability. Re-structuring, innovating, exporting, creating alliances, and internal efficiencies seem to be the mode, according to published articles and literature, firms are utilizing to compete in the new economy. Devising new manners to succeed has become the norm.

8) Many of the problems faced by small and medium sized businesses on the island could be also attributed to business density, to a low declared income (making attaining credit more difficult), to copycat strategies, and to rampant permits given without compliance to laws of need and convenience¹⁴. Previously, and due to the smallness of the island's population and lower income than the mainland United States, businesses incursion into the market needed to be justified with a feasibility study and license from a government regulatory agency. This "requirement" still exists but the parameters are perceived to have changed profoundly. Probe is statistics published by the government.

9) The nearness and political relation to the United States, makes establishing operations in the island easy to most multinationals (Walmart, per example, has 36 major business units, likewise is happening with other major firms). This events cause that, increasingly, small and medium-sized firms competitive position deteriorates. The influx of

¹⁴ This law, though in many aspects archaic, did protect newly founded businesses from early imitators. This allowed for recuperation time. To make the point and example is how currently businesses like gas station are sometime 2-3 in the same block.

foreign and multinational firms possessing ample resources, most small firms are not seeking advantages of this nearness and influx, which could be exercised in both directions. This significance is accentuated by the economies of scale barriers and from competition from nearby Caribbean islands complicates the scenario.

10). The public constant access to computers and E-business transactions, to communication media, and changing consumer patterns worsen the competition spectrum, specifically across gender and sector. Consumers are able to shop online and by phone, thus, making success and survival more difficult. One of the main reasons for such an occurrence is that many SMEs are not technology prone, or maybe they do not have the capacity to benefit from it. Of course, consumers benefit from this scenario of increased competition. Yet, if local firms would use this information to advantage in their marketing projection opposite result might come forth.

11). While the effect of these economic and socioeconomic changes is apparently felt across firm size, sector, and gender of owner, it appears, that smaller firms have been affected the most. Evidence of this is the increasing statistics showing firms filing for chapter 11 and 13 of the bankruptcy code. It appears that the constantly changing nature of businesses and the apparent inability of some small firms to cope with the multiple challenges in the environment have made many small and medium sized firms more vulnerable. Since statistics also report a strong increase of bankruptcies and firms restructuring, which might be a deterrent to new firm start-ups and reinvestment, then, it becomes even more imperative to study what can SMEs do to remain competitive and to develop and sustain the skills needed to compete. Moreover, detecting reasons for failure will enhance business policies decisions and eventually will become deterrent firms demise.

Bankruptcy statistics from the local government reports that business turnover for 1996 reported 681 bankruptcies, which was a 37.9% increase from 1995. Failures have increased progressively since then and do not appear to decrease.

In Puerto Rico the US Bankruptcy court's southwest division (1999), which includes and reports statistics of the island's 78 municipalities, specified that 30% of bankruptcies concentrated on 20 municipalities. During the last eight months 8,301 filings concentrated on the southwest out of a total 11,838 out of which 24% are chapter 11 and 29% chapter 7 filings (Caribbean Business, September 12, 1999). Yet, as the intensity of competition magnifies and incoming large businesses settle locally, bankruptcies grow exponentially.

August 2000, 1,198 cases were filled compared to 1,342 this year. Unfortunately, of the cases filled, 539 were commercial cases, which represents a 21% increase over those filled August 2000. Among the cases reported, businesses with the most cases were, in order of relevance, construction contractors, next were cafeterias, followed by grocery stores, clothing stores and bakeries. In total, until August this year a total 9,709 failure cases were filled, compared to 10,118 at the same time last year.

Of this total, 6,790 are chapter 13, 2,844 are chapter 7, and 75 are chapter 11 filings¹⁵. Puerto Rico Bulletin, as reported by the Caribbean Business newspaper (2001, September 30:11) informed that compared to August 2000 bankruptcies went down by 10%. The same source reports that for May 2002 the numbers are again up. Still the number filled (4,552) is 9% lower than the amount reported by 2001 at the same period. Small grocery stores, cafeterias, bakeries and construction contractors continue to lead in bankruptcy activities. Most bankruptcies this year have been chapter 13. Yet, the bulk of the remaining was filed under chapter 7. Meanwhile, chapter 11 was 33% higher than the year 2001.

Additionally, changes in the world economy, especially for firms that export are adding further challenges for SMEs. The world, United States and the associated Puerto Rican economy, in particular, are currently facing a slowdown, and potentially a recession. Results are evident in the large number of businesses closing, the increasing list of unemployed, diminished sales, inventories accumulations, and enlarged competition levels. Proactive planning, diminishing threats, and seeking new opportunities, including streamlining, become a key feature of firm's strategies. Proactive management is sought after so that CEO's, entrepreneurs, and managers can effectively distribute their time hence to

¹⁵ Chapter 13 bankruptcies Act allows debtors to pay as negotiated in court, to keep all personal properties and protect the assets of the cosigner. Individuals who wish to free themselves of debts, and or businesses that want to liquidate and terminate their ventures use chapter 7. Chapter 11 is reorganization and the debtor can continue to operate, continue with planned goal, and meet certain planned criteria under statutory requirements.

foresee and implement new plans, as well as to distribute resources adequately. These events and the constantly changing competitive environment posit even larger challenges for small and medium sized enterprises. Thus, it becomes more pervasive for firms to develop models that will induce and stimulate firms to exploit their core competencies, and develop sustained competitive advantages. It is this researcher's belief that understanding the factors associated to success will help delineate a model of success and inhibit small business failure. Potentially, this knowledge will not only become the foundation for the development of a model to induce success, but also to devise resourceful private and public policies.

Likewise, the aims delineated will ultimately ratify this researcher's ingrained belief that to acquire capabilities, develop analytical tools, having knowledge of, and understanding what determines success is becoming even more daring as the 21st century evolves and in the future. Since research on the determinants of success and on relating local findings to other research is non-existent within the context of Puerto Rico, thus, this study utilizing qualitative and quantitative research aims to demonstrate the hypothesis formulated which conjecture if the competitive advantages and the role of distinctive competences are determinants of success across sector, gender, and size. The following chapters endeavor to precisely provide evidence such an aim.

1.2. Main purpose of this dissertation and specific objectives

This dissertation aims to first, determine which are the competitive advantages and distinctive competencies exhibited by Puerto Rican firms and their role as determinants of success across gender, size, and sector. Second, analyze which are the success determinants for local firms. Third, investigate what differentiates successful firms from non-successful firms in terms of resources and core competencies. Fourth, and due to the increasing

incursion of women into the labor force and business sphere, to scrutinize if the problems SMEs have in facing the challenges and risks necessary to become successful is gendered and affect their size. Fifth, to add to the research endeavor in studying SMEs while providing empirical evidence that could support creating a guideline/model, which could help firms and policy makers could used to induce success and deter failure? Sixth, to contribute to the scientific debate in Entrepreneurship and strategic management research, specifically concerning what determines and sustains competitive advantages.

Moreover, the scheduled design will aid to act in accordance with with the approach underlying this thesis, which seeks to explore and examine, via qualitative and quantitative research methods, the competitive advantages and distinctive competencies that determine success in firms established in Puerto Rico for at least three years, across gender, and size. Distinctively, the research design will include in its focus if the factors that determine *success* differ across sectors (i.e., retailing, service and agriculture, and wholesaling) to those factors posited by firms elsewhere. Precisely, this research deems imperative to support the general objectives with specific objectives, and this are the following:

Specific research objectives

The objectives for this dissertation are presented in six main objectives and their sub-objectives appear as follows:

A). Objectives related to the competitive advantages and competencies existent and attained by local firms as a result of owners informed decisions and based on the resources possessed and capabilities developed.

1) Identify which are the competitive advantages and competencies existent on Puerto Rican firms.

- 2) Determine which are the areas of strength and weaknesses that give way to and determine success for local firms.
- 3) Analyze if local firms have been able to sustain their competitive advantages and competencies across times
- 4) Evaluate if the strategies used by firms are formulated based on their resources and capabilities or are based on external influences within the environment in which the firms evolve.
- 5) Analyze what differentiates successful firms from non-successful firms in terms of resources and core competencies

B) Evaluate if firm performance or success, in economic terms, is affected either by the strategy used or by management experience, owner intentions and decisions, or the sector, gender and/or size.

- 1) Identify which are the contents of the strategy conducive to success (business plans or planning, areas of strength and weaknesses, external counseling, and goals setting) used by firms and how they affect performance, and if the compare to literature and firms elsewhere.
- 2) Evaluate which are factor (s) determinant for the level of success attained by firms? Do the strategies used, the manager or entrepreneur's role and/or traits, or the traits of the firm determine these?
- 3) Investigate if the problems SMEs have in facing the challenges and risks necessary to become successful is gendered and affect their size
- 4) Evaluate if in terms of the strategies and goals defined, firms performance differ across gender, size or sector.
- 5) Examine and evaluate based on financial performance indicators if the success level attained differ across sectors or gender.
- 6) Evaluate based on the problems expressed, resources possessed, and competencies attained at some point, what differentiates successful and non-successful firms.

C) Analyze the components of strategies that determine success, i.e. planning tools, types of analysis, marketing practices used and incorporated into the firms that according to the new trend in competitiveness can lead to success.

- 1 Identify which planning and analytic tools and marketing practices used by firms across sectors, and the impact these have on success.

2 Evaluate the focus, and utilization of resources geared to increase firm positioning and service improvement across sectors, if they relate to firms' success.

3 Relate the strategies and goals defined to the level of success reached basing this evaluation in terms of the model of success designed.

4 Relate and differentiate if the resources, problems posited and success determinants vary while seeking to determine if environmental variables affect the performance or success levels attained by local firms.

D) Conclude and derive implications regarding if the CA and competencies that determine success for firms on the island relate to those found elsewhere, and establish which learning process can be obtained from this research.

E). Evaluate if in lieu of the findings and analysis of the empirical section, a model of success could be designed, and if this model could be used as guideline for success and demise deterrent.

F) Derive conclusions, suggest recommendations, and seek implications that could be used to probe the formulated hypothesis and assist the sector.

1.3. Theoretical framework underlying this dissertation

The theoretical standpoint chosen for this dissertation is the Resource-Based view of the firm and the concepts underlying this view. The resource-based view contends, with its major contribution the theory of competitive advantage, that success and optimal performance for a firm depends on possessing key resources that have characteristics of value, barriers to duplication and appropriability (Fahy, 2000). This approach focuses on costly-to-copy attributes of the firm as sources of economic rents and, therefore, the fundamental drivers of performance and competitive advantage (Barney, 1986; Rumelt,

1984,1987). Under this perspective, a firm's ability to attain and keep profitable market positions depends on its ability to gain and defend advantageous positions in underlying resources, which, as such, are important to production and distribution (Conner, 1991). In the words of Wernerfelt (1984: 171) “ ...for the firm, resources and products are two sides of the same coin.”

This view connects performance with a firm's special competencies in deploying and combining its human, physical, and reputation capital. Thus, the core notion of strategy as the fit between the internal competencies of the firm and the external opportunities (Conner, 1991; Christensen, Andrews, and Porter, 1987, among others) incorporates also the resource-based perspective. From the standpoint of this dissertation, the resource-based view is considered to have provided the principal contribution, the theory of competitive advantage.

The basic idea of this view is the assumption that the desired outcome of managerial effort within the firm is to obtain a sustainable competitive advantage (SCA), which, if attained, will allow the firm to earn economic rents or above average returns. The focus is on how firms achieve such advantages. The RBV theory argues that to obtain such advantages firms need to:

- Sustain competitive advantage and superior performance,
- Have specific characteristics and types of advantage-generating resources, in other words, possess key resources, resources that have value, and have barriers to duplicity, and appropriability. And,
- On the strategic choices made by management.

To close the subject, one need not forget, that one of the principal insights of the RBV is that not all resources are of equal importance or possess the potential to be a source of sustainable competitive advantage.

1.4. Relevance of the topic from an entrepreneurial and academic perspective

1.4.1. Academic perspective

From an academic perspective, the topic chosen aims to increase the understanding regarding which are the competitive advantages, distinctive competencies, existent and /or lacking in SMEs, as well as understanding why some firms succeed where others fail. The aims formulated are based on the relevance of the topics for any prospering economy, on the importance SMEs have for the economy in terms of job generation and economic contribution, on the significance small firm analysis has worldwide, and on the natural importance any firm has to compete and achieve its goals. Indeed, relevance on the subject also resides on the widespread practical and academic interest on small firms growth and success, as well as on the growth and impact of the overall economic performance of the sector for any economy. The intensification of theoretical and practical studies on firms' signals even further the relevance of the topic.

In the case of firms established on the island of Puerto Rico, the significance of SMEs is greater since competitiveness levels have increased. Competing has become more challenging and, in addition, studies of the nature proposed do not exist on the public scenery. What is more, this sector job generation and percentage contribution to the economy has made the local government design a new secretariat division aiming to gather statistics, design and compile studies bound to profile the sector, to determine what affects them and to seek solutions. Likewise, government policies are being revised to include incentives and benefits measures for the sector. The support mechanisms designed are geared to establish a new role for SMEs, unlike any other period in time. Furthermore, the current recession facing our economy has highlighted the importance of the sector furthermore. While these positive endeavors are enduring, public attitude toward the

importance of supporting and demanding products and services provided by SMEs, rather than large corporations, is not improving. Quite the opposite is happening, and much more needs to be done in this respect. However, the ball rests on the entrepreneur side, also.

It is this researcher's opinion that there is a large need to consolidate statistics and demographics on SMEs and, more importantly, to find out if differences on businesses performance are just locally embedded or if they are intrinsic in nature to businesses elsewhere. Statistical data and studies on the island are not up to date, and what tends to exist are rough government statistics, and studies of private nature, which are requested and retained by the solicitors. As such, this researcher deemed imperative to implement this study and to gear it to find out the existence of the factors described. Moreover, the intention of using the findings not just to understand the causes and remedies of the island's small business sector, but to compare results to other studies and to use the results as a preventive measure to deter failure and as a success motivator further justifies this thesis.

1.4.2. Entrepreneurial perspective

From an entrepreneurial standpoint, the topic chosen is relevant for many reasons. Small business research though rapidly progressing, still lacks a theoretical grounded understanding of the factors underlying small business research. Particularly, this is the case within the constraint of Puerto Rico, whereas business academic research is incipient and lacks structure, where statistics are disorganized, decentralized, and lack usable standards and, mostly is not updated. Studies on the problems facing businesses in Puerto Rico are scarce. Example of this is that the Puerto Rico Retailers Association commissioned the latest census for SMEs in 1995 and received a very low 18% response rate from its associates.

Currently, there are policy decisions oriented to the creation of a small business statistics compilation center and to centralize data. The objective of this unit is and added recognition of the importance of this sector and seeks, as an interim goal to reinforce the decision-making capability of small local entrepreneurs while deterring failures. Native firms face different problems to remain competitive and to survive in the contemporary business environment we are in and finally various sectors are recognizing its importance. Nevertheless a lot more needs to be done.

Of further importance is that traditional businesspersons have not kept up to par with cultural, economic and technological changes. These sector do not often update their stores premises, are not computer oriented, possess outdated shopping and inventories system and many still are behind on other computer technologies like ATM. Other SMEs have not changed or innovated their strategies nor have internalized the need to change and adapt to changing consumer preferences. From another angle, consumers are rapidly changing and their loyalties are non-existent. Moreover, new innovating products and services and offerings are surging daily via various communications means providing alternative to consumer's minimum wishes and desires. Consumer's ease to access resources makes forceful for firms that wish to compete to update and rethink their strategies. In general this researcher is of the opinion that many of the local firms still lack many of the competitive advantages needed to face the challenges competition posits. The reasons could be either cultural, structural or by choice.

Regardless, to compete in the current business scenario, it becomes mandatory for many small independent businesses to seek alternative ways to exploit their distinctive competencies, to gain sustainable competitive advantages, and to seek different ways to improve performance and grow. Moreover, new consumers and publics (sectors that

businesses need to respond to, including investors, government, employees) are demanding not only sustained and profitable performance and growth but also that firms are cost effective. The innovativeness required by today's consumer, the globalization of the economy and the environmental changes brought alongside it make the challenges facing small firms even larger.

From an entrepreneurial perspective, competition often is based on size, on economies of scope and scale, and most SMEs do not possess them. Successful and larger firms have a different business approach. They tend to establish efficient operations and organization; are adept to analyzing and incorporating population, demographics, and work attitudes changes. In addition, management tends to be in the hands of "experts", freeing the entrepreneurs of valued time for analyzing, evaluating the environment, and choosing opportunities. On the contrary, managers in traditional businesses decide and implement their own goals, centralize decision-making, tend to lack vision and risk taking, and unusually have participative management systems. As such, for these groups incorporating changes tend not to be proactive, rather it is reactive.

From a benefit perspective, this study will assist entrepreneurs and policy makers since results obtained from this study will provide insight on the problems of SMEs, and what determine success or failure. Domino effect could assist, among others, to increase the availability of funds necessary to finance new opportunities and increase the sector support. As Penrose (1959:39) stated, "there is a relation between entrepreneurial ability and the finance a firm can attract, and that difficulties attributed to lack of capital may often be related to the existence of entrepreneurial services."

1.5. Research approach and general outline of the thesis

1.5.1. Research approach

This research has evolved in three phases. The first phase involved the implementation of qualitative empirical research carried out in the form of case studies deriving from both successful and non-successful firms. Results from this phase were used as input for the design and implementation of the second phase, the quantitative study. The above phase also comprehends and is reinforced with interviews to small and varied sized businesses across sector and gender but also includes expert opinions in-depth interviews. Moreover, published newspaper interviews to successful businesses also reinforce research findings. In the analysis and conclusion section, results from these study is compared to similar studies done in other countries.

The second phase includes the field study information that was designed, gathered and processed to obtain final data regarding successful and non-successful firms established in Puerto Rico for at least three (3) years. Information included in this phase relates only to native firms in the area of retail, wholesale and services sector. This comprehensive phase not only involves and compares conclusions from both phases including results of the qualitative stage, but also complements results with a small direct survey to small entrepreneurs and experts interviews. Furthermore, the transformation of quantitative data into statistics, and the different computational runs and analysis used to compare summarize findings are also illustrated in this phase. In addition, this phase delves conclusions and seeks to derive implications that could be utilized to probe the assumptions and hypothesis upon which this dissertation is based.

The third phase illustrates via tables and figures a potential model of success for firms. Lastly, findings from all sectors are analyzed and compared to literature in order to

derive conclusion as to which competitive advantages and core competencies can be of relevance to local and international firms success.

1.5.2. Structure of this dissertation

This research is structured in eight main sections with the bibliography and appendix section appearing at the end.

The first chapter presents the introduction, problem statement, main objectives and questions posited for this dissertation. Thus, the introduction presents and articulates in a dialogue format the queries, which lead this researcher to the topic selected and addresses relevant aspects underlying this dissertation.

The second chapter presents the theoretical framework chosen, the resource-based Perspective (from here on the term will be used interchangeably as RBP or RBV) and defends the selection of this perspective from other theories. On the same token, the concepts underlying the Resource-based view with the literature review both from a theoretical and empirical standpoint are presented in this chapter.

The third chapter addresses how this researcher, using as departure the RBV perspective, expands on it to include what to her understanding are the most significant determinants for a firm in a competitive advantage when compared to rivals. Specifically, focus will be on the variables considered by this author i.e., the entrepreneurial perspective, and the role of the Entrepreneur in the decision-making process and in the potential success of a firm. Moreover, emphasis is also on the role gender might have on firm performance, on the sector or industry choices, and size. The chapter expands and extends to the review of literature and its linkages to the thesis theoretical model. An attempt is made to explain how firm's performance or success, the dependent variable, is affected by the control and independent variables, i.e., gender, size, sector and environment and managerial choices. A synthesis is presented on each section to summarize the different standpoints and to compare the benefits of choosing one theoretical alternative versus the other.

Chapter four presents and describes the methodology used in this research, specifically addressing the various methods of analysis used and all phases. This description

includes the utilization of qualitative and quantitative research.

Chapter five focuses on presenting research findings from a qualitative perspective. Case analysis from both successful and successful firms, and results of interviews to CEOs of successful and non-successful firma as well as interviews to lawyers specialized on firms demise are presented in this section. This qualitative research portion comprehends not only research findings, but also a comparison of results using the critical incident technique and the competitive audit test developed by the University of Pittsburgh, USA and theoretical perspectives geared at defending the usage of this method on this exploratory phase.

Chapter six involves several aspects, the quantitative results and the analysis based on survey results using grouped and ungrouped data. Likewise, responses to the direct interviews, expert opinions are included. The responses involve the replies from successful and non-successful firms as well as the pertaining analysis to each portion. Lastly, hypothesis probe are presented as well as a summary of findings.

Chapter seven presents the index that was constructed from the results. This index becomes the model and highlights the differences across firms while signaling success indicators. Moreover, the chapter also briefly describes how the model of success was designed, its weights, and its implications for new startups and established firms. Also, graphs exemplifying how firms are rated on terms of success levels attained based on the variables considered significant to success are presented. Furthermore, a synthesis of how results for each portion of the study correlates qualitative, quantitative results, and the model designed is presented.

Chapter eight, the concluding chapter, draws conclusions and implications as to the competitive advantages and competencies existent in Puerto Rican firms and how they can be used to stimulate success and deter demise for SMEs anywhere. At the end of the study, in the conclusions segment, all sections are related to previous empirical and theoretical research. Appendixes appear at the end of the study. Thus, this chapter addresses the main questions in the research, relates findings to other studies, and specifies how this research can contribute to the theoretical understanding on SMEs and Entrepreneurship. Moreover, to epitomize this research, findings are presented in tables and graphs relating specific and general findings based on the thesis goals. Consequently, findings are analyzed across gender

and type of business, in order to draw conclusions and posit recommendations that could assist the sector and policy makers.

CHAPTER 2

ANTECEDENTS AND THEORETICAL FRAMEWORK: RESOURCE-BASED VIEW OF THE FIRM

2.0 Introduction

The Resource-based view perspective (RBV), the theory selected for this thesis explains better than any other theory the determinant factors that might stimulate or hinder firm's performance. The reasons why this theory is selected and the defenses for this choice appear in following paragraphs. The Resource-Based View of the firm (RBV) and the conditions underlying business or firm performance assumes that each organization is a collection of unique resources and capabilities, each of which provides the basis for its strategy (Barney, 1991; Hitt, Ireland and Hoskisson, 2000). The view is grounded on the perspective that a firm's internal environment, (in terms of its resources and capabilities developed), is crucial to the determination of strategic actions than is the external environment (Grant 1991).

To give the present study a solid foundation and relate it to previous research in the field, the theoretical assumptions underlying this research are related to other theories. However, before selecting the chosen theoretical framework it became imperative to carry on a revision of other well-known and related theories that potentially could explain how the firm internal decisions could affect performance. The revision and comparison of this

theories and how they relate to the resource-based view are presented here. Furthermore, the resource-based view encompasses how organizational or firm performance depends on the existence of resources, which, if appropriately deployed, based on the capabilities of its directors will turn into competitive advantages for the firm. The view, as Penrose (1959)¹⁶ did foresee, incorporates the role the environment has on attaining the strategy formulated. Adding together, this chapter includes not only the evolutionary development of the RBV of the firm, but also, it addresses the point of view of acknowledged contributors to this theoretical development, as well as studies on how the theory contributes to enlighten the underlying concepts for this thesis.

2.1. Description of the theoretical standpoint within which this research is framed

The advancement of the RBV has been under scrutiny for many years, even though not always with the same significance. Though Penrose's was the pioneer, the initial popularity started in the 1960's, when some researchers suggested (Andrews, 1971; Ansoff, 1965; Hofer & Schendel, 1978) that firms could have sustained competitive advantages by implementing strategies that exploit their internal strengths. This exploitation always paired to responses to environmental opportunities, while neutralizing external threats and avoiding internal weaknesses. Yet, it was not until the late 1980s with the work of Wernerfelt's (1984) when the resource-based view became admired. Presently, this theory is not only popular but also fashionable. Potentially, it might be reaching a higher peak. However, the initial acknowledgment of the impending significance of firm specific resources, go back to Chamberlain and Robinson in the 1930s (Fahy, 2000: 94).

¹⁶ Penrose is considered the leader- founder whose seminal work became the basis of the Resource-Based View of the firm.

Penrose (1959:34), subsequently, developed the view focusing on the entrepreneurial services provided and the goals of owners. Likewise, to economist like Penrose and others, the emphasis was on heterogeneity not market structure. To her and her fellow writers, unique assets and capabilities of firms were very important factors for attaining resourceful firm performance, which then gave rise to imperfect competition and the attainment of above normal profits. As early as 1933, Chamberlain had already identified the existence of key capabilities for firms, example technical know-how, reputation, brand awareness, the ability of managers to work together or in teams, patents, and trademarks. This terminology is now in vogue in strategy literature (Day, 1994; Hall, 1992).

To shed light on the selection for this theoretical standpoint, several well-known models and typologies of strategy were revised: Ansoff (1965) models, the frameworks of Andrews (1971) and Porter (1980). The SWOT analysis¹⁷ was reviewed as well as the Strategic Matrix proposed by the Boston Consulting group. As a result of reviewing this models diverse points of view surfaced. Per example, Porter's work, which is amply recognized and based on the Bain-Mason Industrial Organization (IO) model, sees the firm as a bundle of activities. The resource-based view, on the contrary, sees it as a bundle of unique resources. Porter (1990) focused on the environment–performance relationship with little emphasis on the impact of firm attributes on performance. He also assumed that firms are identical in terms of relevant resources, and that any attempt to develop resource heterogeneity has no long-term feasibility because of the high mobility of strategic resources (Spanos and Lioukas, 2001). The RBV view assumes and focuses on the relationship

¹⁷ SWOT analysis is used often to provide an overview of whether the firm's business is healthy or not. It is grounded on the principle that strategy-making efforts must aim at producing a good fit among a company's resource capability and its external situation (competitive conditions, market opportunities and external threats to profitability Thompson and Strickland 2001:117).

between the firm internal characteristics and performance, and that firms may be heterogeneous in relation to the resources and capabilities upon which they base their strategies. A further assumption is that resources and capabilities are not perfectly mobile across firms; this results in heterogeneity among industry members.

After a dormant period in the 1980s, the resource-based view (RBV) concept shed some light again. Several authors (Ghemawat, 1986; Hall 1989; Grant 1991; Williams, 1992) brought to light cases where companies with particular skills and capabilities were able to outperform rivals. Nonetheless, the theoretical roots go back to Penrose (1959), when she brought back to light the importance of the individual firm. Some industrial economists also contributed significantly by establishing how performance differences persisted in situations of open competition (Amit and Schoemaker, 1993; Barney, 1986a, 1991; Dierickx and Cool, 1989; Peteraf, 1993). Since the 1990s till today the resource-based view has assumed the center stage in strategic management literature.

Moreover, from its birth to today, and reviewing the various studies that have contributed in assorted manners to the RBV either from a theoretical or from an empirical nature, studies regress to David Ricardo (1819). He emphasized that the conception and maximization of rents was the main engine of commercial activity. To him, the concepts of rents and quasi-rents were very imperative if the firm was to thrive. Yet, by far, the most forceful exposition of this perspective remains that of Schumpeter (1934) with the concept of innovation. Accordingly, though, the formers' work has not been in the mainstream of economic thought His contributions are substantial. To him competition was fierce and that repeatedly older firms were unable to compete with flourishing new and innovative firms. Because of these waves, new investments are halted, the economy is disrupted and it becomes impossible to make reliable calculations about the future. As a result, the

possibilities offered by the current cluster of innovations are exhausted and interest rates rise.

Regarding the origins of competitive advantage, Penrose (1959) emphasized that the origins of competitive advantage are in the valuable resources or competences the firms possesses, which often are intangible assets like skills and reputation (Wernerfelt 1984, Collis, et. al (1995). These intangibles are relatively immobile resources that need be to nurture and should guide the choice of strategy. Even more, the previously mentioned studies suggest special linkages between the resource position of the firm and its sustainable competitive advantage. Rumelt (1984) saw this linkage by asserting that understanding the sources of sustained competitive advantages for firms is a major area of research in the field of strategic management. While Nelson and Winter (1982) contributed to the view introducing the concept of organizational routines. These authors like other strategy scholars including Lippman and Rumelt (1982) and Rumelt (1984) examined the effects of resource heterogeneity on inter-firm differences and in efficiency (Seth and Thomas, 1994: 177). Evidently, in the early contributions there was no explicit distinction between resources and capabilities. However, to Amit and Schoemaker (1993), resources are assets that are to a certain extent pertinent for firm performance since they are either owned or controlled by the firm.

2.1.1. The resource-based view of the firm: Contribution, distinctiveness, how it relates to other theories and to this dissertation goals

An extensive review of literature on the subject shows that the RBV includes and is intertwined with concepts from mainstream strategy management research and has also become a paradigm in the field (Peteraf, 1993), specifically its focus on distinctive competencies (Andrews, 1971; Ansoff, 1965; Selznick, 1957) of heterogeneous assets. The importance of these assets according to Kirzner (1997) is also a basic one for

entrepreneurship development. In the same line of thought, entrepreneurial opportunities are thought to exist when different agents perceived the value of resources that other sectors have not seen, converting and exploiting this opportunities. RBV is also related with the rate, direction, and performance implications of diversification strategies (Ramanujam and Varadarajan, 1989), and with organizational economics (Barney and Ouchi, 1986).

The contribution this theory provides to this research resides on the acknowledging that entrepreneurship is a complicated part of the resource-based framework (Rumelt, 1987; Connor, 1991). Renowned authors have contributed positively to the development of this view, among them Castrogiovani (1991), Chandler and Hanks (1994). They abovementioned contributed to the theory by reporting that firms should select and pursue their strategies to generate rents based upon resource capabilities. Other studies focusing on the RBV by Barney (1991), Grant (1991) and Teece, Pisano, and Shuen, (1997), point out that the RBV fits comfortably with firm-specific capabilities, assets and the existence of isolating mechanisms as the fundamental determinants of firm performance. Other studies, like stress that (McCloskey (1985), the view is closely related to the notion of “core competences” and treatments that stress intangible assets, as well as the emphasis on the sustainable competitive advantage (Schulze, 1994:134) needed, and show strong concern for preventing imitation of valuable resources (Grant, 1991). Some studies also tackle the idea that resources are relatively immobile, should be nurtured, and guide the choice of strategy. Studies by Stalkm, Evans & Schuman (1992:57), on the reversal of fortunes represented by Kmart and Walmart¹⁸ and Sears Roebuck, owner of Home Depot, exemplified how the success of these firms is based in terms of capabilities based competition.

¹⁸ Both are renowned US retailers. History of Goliath eating David was not repeated here. Kmart was the retailer giant, which possessed special competencies, yet Walmart swallowed it only in only ten years.

Additionally, a great deal of research has focused on sources of sustained competitive advantage, on either isolating a firm's opportunities and threats (Porter, 1980,1985), unfolding its strengths and weaknesses (Hofer & Schendel, 1978; Penrose, 1959; Stinchcombe, 1965). The former authors contributed by analyzing how strengths and weaknesses are matched to corresponding strategies. Barney (1991:99) reached a similar conclusion while reviewing the same study. Moreover, Mahoney and Pandian (1992), building upon the work of Penrose (1959), noted that a firm achieves rents not because it has more or better resources, but because the firm's distinctive competence allows it to make better use of the resources that are available¹⁹. Rent is achieved through the effective utilization of a firm's resources to achieve competitive advantage.

In modern times and in the year 2002, in addition to using the RBV to study firm performance, the view has been has also been used to analyze governmental roles. The standpoint for this scrutiny is the subsequent economic downturn, which is the second phase of the cycle, recession. The importance of this simile is the effect this point of view has on firm's success and performance. The decline of recession continues however, past equilibrium in a secondary wave that Schumpeter (Penrose, 1959:32) attributes to "errors, excess of optimism and pessimism. Reckless, fraudulent and otherwise unsuccessful enterprises created in the optimism of expansion cannot stand the test administered by

Currently, year 2002, Kmart is facing serious market difficulties and has submitted the corporation to chapter 11 bankruptcy procedures.

¹⁹ Resources are not productive by themselves but because organizational capabilities are developed to undertake productive activities that add value to the stakeholders. As such, these capabilities provide distinctive competencies or core competencies that when attained, as Hamel and Prahalad (1990:79-91).expressed, will distinguish the firm and will project reaching those capabilities fundamental to a firm performance and strategy.

Recession." Part of the current fiscal and economic policy used by Secretary Greenspan in the United States has been acknowledged as being based on this author's work.

TABLE 2.1. A Historical Comparison of Resource-Based Theory to Five IO Related Predecessors

	Similarities	Distinctions
Neoclassical	<ul style="list-style-type: none"> ◆ Firm as input-combiner: emphasizes physical production of goods or services 	<ul style="list-style-type: none"> ◆ No “ given” production algorithm; identification of resource combinations is problematic ◆ Critical resources may be immobile (not available for purchase, or not easily jettisoned if no longer productive): may be by-products of teamwork ◆ Firm size and scope are important issues
<i>Bain-type IO</i>	<ul style="list-style-type: none"> ◆ Firm’s environment (other firms/public policy) poses critical constraints on strategy ◆ Persistent above-normal returns are possible 	<ul style="list-style-type: none"> ◆ Restraints on output through monopolistic or collusive action, or investment in “ artificial” entry deterrence, are not primary sources of persistent above-normal returns. ◆ The firm (not the industry) is the appropriate unit of analysis for understanding sources of above-normal returns. ◆ The internal organization of firms is a critical variable. ◆ Firms’ behavior may be at least as much the result of conscious choice as it is a foregone conclusion from industry structure.
<i>Schumpeter</i>	<ul style="list-style-type: none"> ◆ Spectacular above-normal returns can result from new ways of competing ◆ Entrepreneurial vision is at the heart of the firm ◆ Potential imitators always exist 	<ul style="list-style-type: none"> ◆ Feasibility of new ways of competing does not rest on monopolistic (output-restraining) practices ◆ Imitators are constrained by costly-to-copy resources ◆ Exogenous shocks can be critical to “creative destruction” ◆ Healthy earnings can result from less than “revolutionary” innovation
<i>Chicago</i>	<ul style="list-style-type: none"> ◆ Firms are production and distribution efficiency-seekers ◆ Size and scope of the firm reflect extent to which production and distribution efficiencies are achieved 	<ul style="list-style-type: none"> ◆ Focus more on the intermediate (not long) term, so entry need not dissipate above-normal returns in the time span relevant to the firm and its strategic choice problem ◆ Efficiency seeking goes beyond current products, extending also to new products
<i>Coase/Williamson Transaction Costs</i>	<ul style="list-style-type: none"> ◆ Asset specificity and small numbers are critical concepts constraining the firm’s strategic options 	<ul style="list-style-type: none"> ◆ The heart of the firm centers on deployment and combination of specific inputs rather than on avoidance of opportunism

Source: Conner, K R. (1991:133)

Table 2.1 not only addresses how the chosen view relates to other theories, especially the industrial organization model, but, also, serves to illustrate and defend the position of selecting this view above others. Relating IO-related theories to the resource-based view seeks, ultimately, to explain how diverse points of view deal with firm’s with aims to obtain above-normal returns (Barney, 1991, Wernerfelt, 1984). For Barney to obtain returns under

the RBV requires that the product is distinctive in the eyes of buyers or is selling at low cost position²⁰. Comparing the neoclassical view to the RBT shows that the former is at the heart of the resource-based theory, while, the RBV does not include the assumption of freely available and perfectly specifiable production, as does the neoclassical theory. As argued by Schumpeter, the resource-based theory recognizes the power of revolutionary innovation to shift market positions (Prahalad and Hamel, 1990 and Rumelt, 1974).

The resource-based theory, indeed, does reject the necessity of having monopolistic earnings to support competitive initiatives. To the Chicago view, the resource-based theory sees returns as a result of how fortunate the firm might be in acquiring, combining, and deploying resources, rather than from the structure of the industry in which the firm belongs to, as is the case of the Bain type IO. Moreover, the view contributes to this research with its examination on the role of the manager. Under this standpoint the manager is central in the decision making process. This figure decides which inputs will have value for products or services in excess of their investment and expected returns, and also which resources will be difficult for rivals to copy or imitate while at the same time trying to exploit them.

2.1.2. Unresolved issues.

Apart from of the acknowledged contributions of the view, a number of researchers rationalize that there are some unresolved issues within the view (Fernandez & Suarez, 1996). While some point out to the confusion in terminology and definitions including as to what are productive resources, others see complexity in making the point of view operative in terms of objectives, and in the use of measures that are valid and could be used to generalize

²⁰ This option of above normal returns is related and reflects Porter's (1980) generic strategies. Empirically, this concept is very relevant in the world of business pervasive product differentiation, according to Conner (1991).

conclusions, as reported by Fernandez and Suarez (1996:85). Furthermore, various sectors see a need for the view to inquire into the role of the manager (Hamilton, 2001) as deciding center for a firm attaining performance, especially in the 21st century landscape so characterized by economic upheavals.

From the beginning of the utilization of the resource-based view, measuring resources was done mainly from a traditional financial standpoint; currently, resources that are more complex are used and measures are wide-ranging. The aforementioned authors point out that measuring resources have traditionally used only optimal resources; yet, those who argue in favor of the RBV do not mention resources that might be mediocre or “bad” resources. Only strategic aspects were used to measure firm performance according to Foss, Knudsen & Montgomery (1995:8). In practice, most researchers and practitioners understand how difficult it is to really identify valuable resources. An obvious explanation is the differences on success levels attained by firms that started at the same period of time with similar resources, often in the same industry. Further, the focus on the analysis of internal analysis has ruled out the necessary balance between external and internal analysis. With the exception of Schoemaker and Amit (1994), researchers have given little attention to the combination of both sectors.

It is the judgment of this researcher that most studies only focus on results of performance once it occurs, not previously. What's more, analytical focus rests on firms that have been or are successful, or those firms diagnosed as failed. Firms struggling encounter no guidelines or success indicators. While their examination is reported *a posteriori*, the interim phases on how to turn the tide, on determining what has really made one firm succeed or not, still needs plenty of research. One potential lapse might be that no thriving entrepreneur will furbish leads for other firms to succeed, because of fear, “among other” of potential imitation.

On the same token, CEOs talk of their success, but most do not care to remember failures. A large critique in research circles is that for a theory of the firm, to be complete, requires honest objective collaboration from all sectors utility, those who succeed and those that fail. Likewise, a lot of secrecy will have to come out of the closets while reality set in.

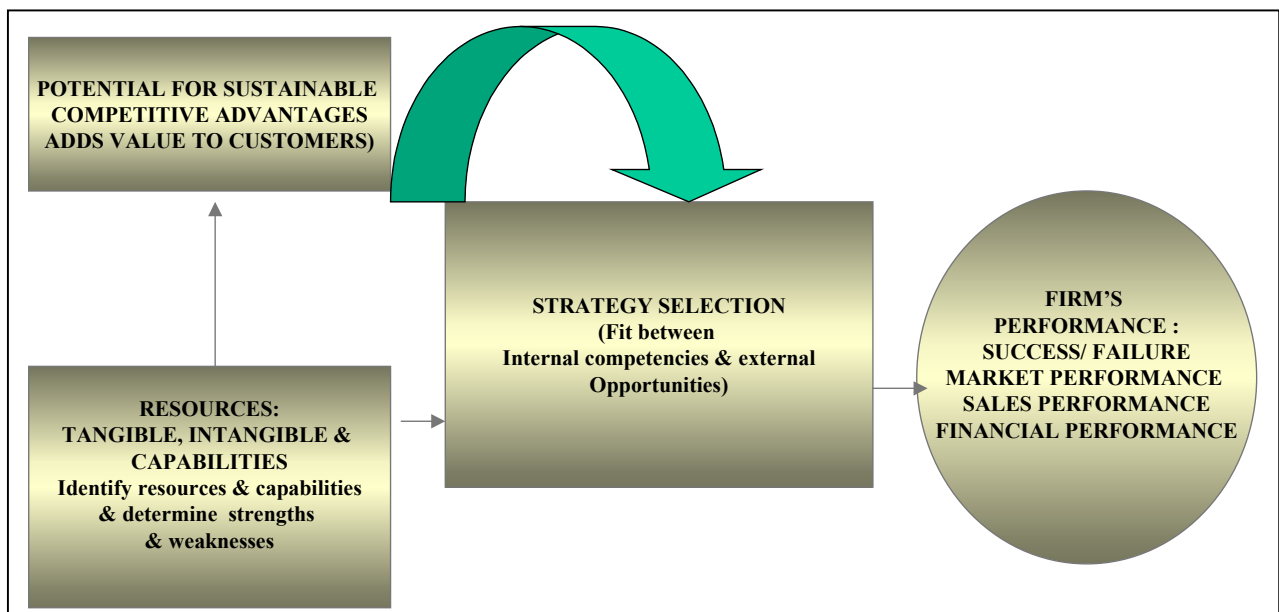
Thus, the theoretical model proposed for this thesis will contemplate determining the competitive advantages and competencies that determine success for SMEs across gender, sector, and size. However, though, the focus will also be on the firm, on the allocation of resources necessary to attain success. Additionally, the study will strongly focus on the effect the external environment and the sector in which the firm evolves might have on the entrepreneur decision-making, and ultimately on its effects on the firm results. It is this researcher's belief that firm's and their CEO's decisions are central for firm performance. Moreover, if firms were isolated, their performance would not be affected by economic, socio-cultural (consumer preferences) and political changes. On the contrary, the opposite is what occurs. Concurring with Penrose (1995:5) revision of her world-renowned study, the enterprise cannot be considered isolated from the environment in which it evolves; on the contrary, firms are immersed in their surroundings.

Thus, the evaluation of their resources and capabilities is strongly determined by the environment (i.e. labor training, technological developments and levels of competitiveness as well as cost and access to resources). In spite of this, “ there is considerable evidence showing that small firms, because of their size are restricted by their environment to specified opportunities as such limiting the prospect of expansion “, (Penrose, 1995:215).

2.2. Revision of the conceptual and theoretical framework

Under the RBV standpoint, small firms need to be analyzed from the resources possessed, the capabilities developed, the competencies attained, and the competitive advantages developed either if they are sustained or not. Model (fig. 2.1) not only exhibits these relationships, it goes further. Under the model proposed, firm performance rests strongly on the entrepreneur and the choices he or she makes of a strategy in lieu of the firm's existent and initial resources. For clarification purposes, the theoretical perspective described under this model will be addressed on chapter III; this chapter will deal with aspects to be considered relevant in terms of how these are immersed or relate to the RBV perspective.

Figure 2.1. The resource-based view model -theoretical model



Source: Researchers' elaboration based on reviewed literature on Grant's (1990:138) framework for analyzing resources and capabilities.

RBV researchers and their studies into the nature of competitive advantage have made an important contribution to the field of strategic management. The view has benefited from

the rigors of its economic origins and has enhanced the understanding of what determines competitive advantages. The standpoint also explains why some resources are more advantage generating than others, a concept that might explain SMEs even starting with the same resources might not make “ the right choices”. What's more, the RBV through its insights into the nature of competitive advantage, also explains why some resources are more advantage generating than others. Consequently, the view also indicates how advantages persist for some firms even in periods of open competition like the ones raging on the island of Puerto Rico. One of the assumptions for this dissertation is that this study can empirically contribute and validate the contributions of this view for SMEs, and the way it explains the role competitive advantage has on firm’s success. Discussing the role of the manager and resource deployment, the RBV also addresses how advantages persist for some firms even in periods of open competition like the ones raging in the island of Puerto Rico. One of the assumptions for this dissertation is that this study can empirically contribute and validate the contributions the RBV has for SMEs, and the role of competitive advantage has on firm’s success. Furthermore, the perspective's contribution to the present research context is also framed in the entrepreneurship literature. Traditionally, entrepreneurial literature focus has been on the individual or the entrepreneur, on his socio demographic characteristics and limited decision-making. For this thesis, the entrepreneur is the central figure and he or she endows the firm with the personal abilities that facilitate small firm growth and performance, thus, focus is also on the internal analysis needed to implement to counterbalance pressures from the external environment and on the individual decision maker and his choices.

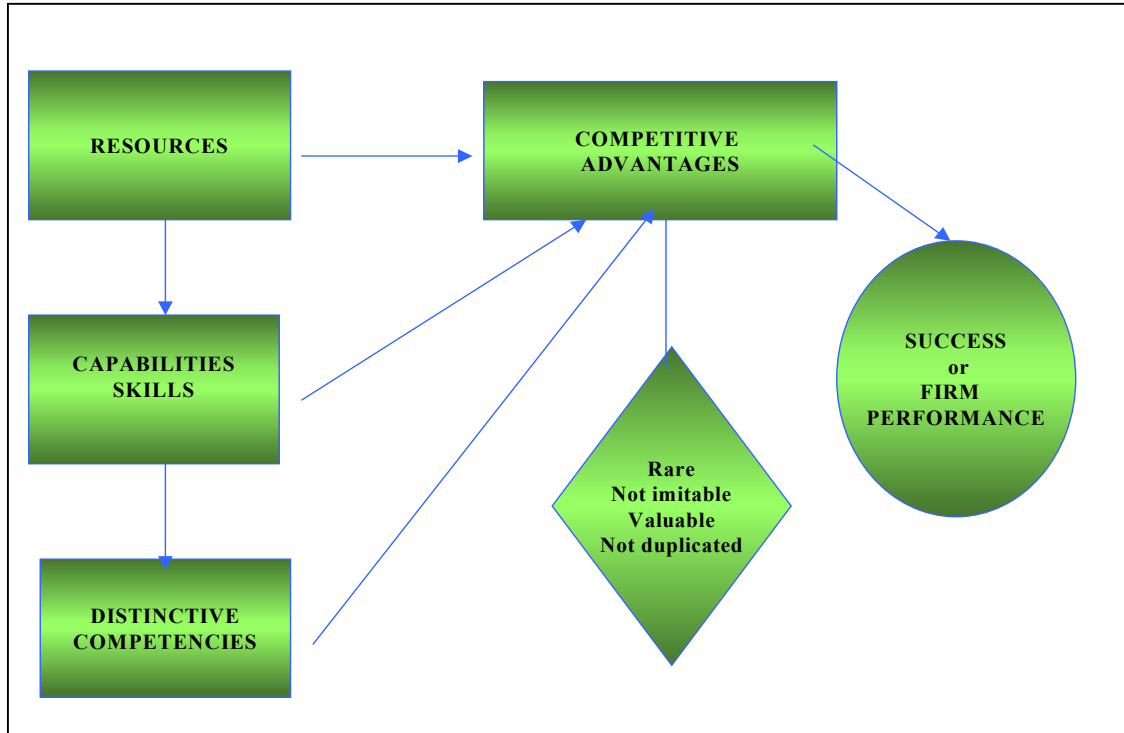
Thus, the Resource-based view RBV underlying premise is that firms differ fundamentally because each firm possesses a unique “ bundle” of resources –tangible and

intangible assets and organizational capabilities to make use of those assets. The view also addresses the idea that each firm needs to develop competencies from resources usage, and that resources have to be exploited and provide the added value sought after by its publics. Resources, as such, become sources of competitive advantages. The view, as used for this research context, rests on the notion of “core competencies”. These are understood as a capability that once identified, nurtured, and deployed throughout the firm, become the basis for lasting competitive advantage. Central to the view is the ability to achieve set goals (Pearce and Robinson, 2000:194). To these authors, three basic resource types exist (tangible, intangible assets, and capabilities) that create the bases for distinctive competencies²¹.

This view was at that time and remains today the most relevant manner for the firm’s executives to implement internal analysis. Moreover, for resources to be of relevance they need to be difficult to imitate and copy, be valuable, long lasting and durable, nontransferable and rare. Indeed, when analyzing resources that could provide a competitive advantage, the role of managers’ becomes central and important. Once the entrepreneur or manager (in the case of hired management) identifies which resources provide strengths or weaknesses for the firm (Penrose, 1959:32-34) her or she should seek to convert these resources on capabilities that could be transformed into competitive advantages. Following is figure 2.2 stresses the relationship between the firm performance and the role of the manager.

²¹ A distinctive competence is something a company does well in comparison to its competitors according to

Figure 2.2. Relationship between firm success and the type of resources



Source: Researcher's own elaboration based on Hitt and Ireland's (2000) description of competencies.

From the standpoint of this dissertation, and as literature posits, a major contribution of the Resource-based view perspective is that it can help to understand the importance of the firm's internal resources (Veciana, 1999) in its capacity to achieve high performance as well as to explore how small firms can utilize different resources in their strategies. The view also posits, when studying small firms, that due to their small size, environmental influences also need to be considered.

2.3. From a strategic standpoint, how the RBV relates to performance

C.K Prahalad and Gary Hamel (1990).

The RBV²² is key to strategy formulation, and to understanding the relationship between resources, capabilities (Collis and Montgomery, 1995; 1995; McGee & Finney, 1997), competitive advantage, and profitability (Grant 1991). The view also provides insight to understanding the mechanisms through which competitive advantage can be sustained Grant (1991). To this author, successful organizations, therefore, should bring all their activities to be consistent with their strategy. Moreover, the strategy chosen should allow the firm to better exploit its core competencies relative to opportunities in the external environment and resource choices. From a strategic perspective, the RBV focuses on the on-going search for rents (income) and on the view that firms should pursue strategies that are best supported by their resource-based capabilities (Chandler and Hanks, 1994).

Specifically, the resource-based view refers to the strategic choices regarding markets and products as well as the ways to use existing resources, and the means to acquire or develop additional unique resources (Wernerfelt, 1984; Andrews, 1971). From an actual and practical standpoint, developing a strategy is enormous especially if it is understood by all sectors concerned. As such, strategic vision is a prerequisite to an effective strategy. Thus, a significant strategy should incorporate three elements (Thompson and Strickland, 2001: 34): customer needs, customer groups to be served, and the competencies the firm needs to deliver value. To deliver this value, accomplishing goals and objectives, firms need to clarify their strategic intent, and define big audacious goals, per example being dominant in certain niche market. Of course, this is a long-term goal. Strategic intent becomes highly relevant. This intent occurs when a company exhibits and relentlessly pursues and ambitious strategic objective and concentrates its competitive actions and energies on achieving such an

²² RBV from now on will be understood as Resource-based view; RBA as resource- based approach RB or resource based.

objective. It is a commitment.

Additionally, from any point of view, strategies are management's answers to how objectives and goals will be achieved, or how the firm will pursue the organization mission and strategic vision. Hence, strategy entails managerial choices and constant evaluation. Thompson and Strickland (2001:11) state that, the merit to evaluating a firm's strategy, from a qualitative standpoint, resides on its completeness, internal consistency, rationale, and suitability to the situation. Yet, from a quantitative point of view, evidence of how well a company is doing rests on studying the firm's records and its recent financial performance. Furthermore, the same authors assert that the two best empirical indicators of performance are: 1) whether the company is achieving its stated financial and strategic objectives and 2) whether the company is an above average performer. Using the subject of strategy in a comparative manner and from different points of view, table 2.2 table reviews strategic literature under the Resource-based view while defending the selection of this theoretical standpoint.

2.3.1. Diverse alternatives to strategy formulation and implementation from the resource-based view perspective

The Resource-based perspective alone, according to some researchers, most probably might not be sufficient to explain the success and performance of small firms. Many disagree, including this researcher. After reviewing different theories including Porter's Value Chain, Population ecology, Industrial economics, and their coverage, as well as their focus on studying the corporation and managerial decision process, I could not come to terms with these theories views as a logical explanation of small firm's behavior. To my knowledge, the Resource-Based view serves better to explain small firms behavior. In order to justify the selection chosen, contrasting views on the theories mentioned is presented on a table format.

The following table contrasts the different points of view and highlights various noteworthy authors that have historically contributed to the resource-based literature and empirical studies.

Table 2.2 Resource-based view strategy literature

MECHANISMS	REFERENCES
Distinctive competencies and core competencies are those difficult to replicate.	Andrews, 1971.
Corporate culture that is valuable, rare and imperfectly imitable due to social complexity, tacit dimensions and path dependency.	Barney, 1986a; Fiol, 1991.
Culture that is the result of human action but not of human design.	Arrow, 1974; Hayek, 1978.
Invisible assets that by nature is difficult to imitate.	Itami, 1987.
Valuable heuristics and processes that are no easily imitated.	Schoemaker, 1990
Response lags.	Lippman and Rumelt, 1982.
Time compression diseconomies.	Dierickx and Cool, 1989.
Resource position barriers.	Wernerfelt, 1994.
Unique or rare resources that are not perfectly mobile.	Barney, 1991.
Resources and limited strategic. Substitutability by equivalent assets	Dierickx and Cool, 1989.
Valuable non-tradable or imperfectly tradable resource.	Barney, 1991.

Source: Researcher's elaboration based on Mahoney and Pandian, 1992:363-380.

The RBV also proposes that advantages to firms lie in the ability to make good strategy choices and on how to implement them while choices depend on information and careful analysis of the firm environment (Porter, 1991:110). Additionally, even though linking strategy and the firm's resources and skills has suffered comparative neglect and strategy research has been criticized in the study of smaller firms, practical applications exist to prove their viability (Grant, 1991). Formulating a strategy, to Grant requires determining the correct definition about the area of business of the firm, identifying resources and capabilities and maximizing rents over time, primary task of the RBV.

2.3.2 Strategic approaches.

There are several schools of thought and all of them aim at clarifying how strategies are delineated from different perspectives and try to systemize how the RBV focuses on the strategic direction. The most conventional approach from these schools is the rational view,

based on Porter’s industrial organization model. Examples of this group are Cyert and March, (1963) and Mintzberg, (1978). The ecological model based on biological concepts and lead by Hannan and Freeman, explains how firms compete in the market and which is the essence of their strategy. See table 2.3 for a comparison of these standpoints to the RBV.

TABLE 2.3. Summary of Different Diverse Strategic Approaches

	Rational	Process	Ecological	Resources
Major contribution	Ansoff (1965); Porter (1980,1985)	Cyert & March (1963); Mintzberg (1978)	Hannan & Freeman (1989)	Wernerfelt (1984); Barne (1991)
Base Discipline	Economics	Psychology & Sociology	Economics, Biology	Economics
Strategic Concept	Establishment of the company's objectives at 1% and of the planned actions to reach objectives	Action guide lines of the company as a result of the emergent process of the organizational learning	Positioning, market niche. Do not exist strategic election	Search for profitability by accumulating and exploit its resources and capabili
Characteristics	Explicit plan, deliberate	Emergent, collective	Passive, the change	Deliberate and emergent
Level of Analysis	Mainly sector	Company	Population or group	Company
Intern/External approach	Extern	Intern	Extern	Intern
Content/Process approach	Content	Process	Process	Content/process
Static/Dynamic Approach.	Static	Dynamic	Dynamic	Dynamic
			Result of natural	

Source: Fernandez Rodriguez, Z & Suarez Gonzales, I, (1996:83). More points of view are in the process of being added to this table (Researcher ‘s design based on literature).

2.3.3. The role of resources

The resource-based view focuses primarily on the resources and capabilities that a company has and only secondarily on the industries/markets in which it operates. The view also posits that all organizations develop unique resources and capabilities, which becomes the ultimate source of competitive advantage. Yet, these resources are not equally found across firms. Under this view the most basic resource is heterogeneity, which assumes that at least some resources and capabilities are different across firms (Barney, 1991). The pioneer on the subject, Penrose (1959), describes better than any other researcher the role resources

for the firm. The most salient characteristic of the Resource-based perspective is the focus on the firm's internal strengths, a view that is connected, mostly, to the seminal work of Penrose (1959). Further, at the most basic level, the perspective describes the firm in terms of the resources that it integrates: "Thus, a firm is more than an administrative unit; it is a collection of resources the disposal of which between different uses and over time is determined by administrative decision", Penrose (1959:24). Table 2.4 below clarifies and describes the type of resources typically found to be sources of competitive advantage and lists authors that have extensively delved on the subject, including pioneers like Wernerfelt (1989).

TABLE 2.4. Classification of the firm's resource pool according to various authors

Author	Tangible Assets	The firm's resource bundle intangible assets	Capabilities
Wernerfelt (1989)	Fixed assets	Blueprints	Cultures
Hall (1992)		Tangible assets	Intangible capabilities
Hall (1993)		Assets	Competencies
Prahalad and Hamel (1990)			Core competencies
Itami (1987)			Invisible Assets
Amlt and Schoemaker (1993)			Intermediate goods
Selzinck (1957); Hitt and Ireland (1985); Hofer and Schendel (1978)			Distinctive competencies
Irvin and Michaels (1989)			Core skills

Source: Table was redesigned and prepared by the researcher following Fahy's (2000)

Resources are classified in many ways, but the most common classification is based on three categories: tangible, intangible and capabilities. Grant, (1991:115) identified six categories. Williamson (1975) identified physical capital resources, human capital resources (Becker, 1964), organizational capital resources, financial resources, technological and reputation. What is more, resources have to possess some requisites if they are meant to be sources of competitive advantages. These traits are offered according to some authors, and from all standpoints, even though resources are sources of competitive advantage yet not all resources provide these advantages. What resources and capabilities do for a firm is that they

provide the potential for competitive advantage. Thus, competitive advantage, and particularly sustainable competitive advantage; as depends on the nature, type of resources, and the capabilities that a company has, how these have been amassed and how they are used and deployed. The Resource-based view also claims that resources, as such, are tradable and thus transferable and imitable and that instead, capabilities are unique and the source of competitive advantage. Also, that resources must have some capacity to generate profits or prevent losses. If a firm is to obtain high levels of performance and sustained competitive advantage, it needs to possess resources that are heterogeneous, difficult to create, substitute or imitate.

TABLE 2.5. Strategic resources requisites

Author		
PETERAF (1993)	BARNEY (1991)	GRANT (1991)
Heterogeneity	Valuable & Rare	Durable
Limits ex post to competition	Not imitable Non substitutable	Transparent Replicable
Limits ex ante to competition Imperfect mobility <ul style="list-style-type: none"> • Imperfectly mobile resources • Shared rents 		Transferability Appropriability

Source: researcher's own elaboration..

Moreover, studies by Hofer and Schendel (1978) under the RBV suggest that the source of competitive advantage is rooted in a firm resources and capabilities. Barney (1991) also found that resources include, among others, capital equipment, skills of individual employees, reputation, and brand names. Most authors have reported that for either of these resources to exist, managerial capabilities need to exist. To clarify, Love and McGee (1999) differentiate capabilities from resources in the sense that no monetary value can be assigned to them, as is the case of tangible resources.

However, still, adequate explanations have not been well developed to explain why

some businesses succeed where others fail and how managers choose one strategy over another. Dierickx & Cool, (1989), and Barney (1986) sum up that, for firms, the early choices of resources stocks and shape future choices and define strategic positioning of a firm. Brush and Green (1998) are of the opinion, that in spite of the pivotal importance of resource choices, comparatively little empirical research investigates resource priorities or choices and even more, how they change over time. This researcher has observed the same occurrence across countries, and is of the opinion that one of the reasons for SMEs demise lies precisely on their resources priorities and/or utilization.

Studies on the RBV by Mahoney and Pandian (1992) sustain that to be successful firms need to possess some advantage, and, that the most important resources to firms are those which are durable, difficult to identify and understand, imperfectly transferable and not easily replicated. Therefore, the ability of the firm to use resources and capabilities to support a sustainable competitive advantage is essential to the planning process. Likewise (Grant, 1991) wrote that the firm's resources, capabilities, and strategies are thought to impact performance. Resources, to him, are the source of a firm's capabilities, whereas capabilities are the main source of competitive advantages. Mahoney and Pandian (1992), posited the same relationship as reported in Chandler and Hanks (1994:332).

Under this analogy, firms are successful because they possess unique resources. Resources are not valuable by themselves, but only because they allow the firm to perform activities that create advantages in particular markets. Resources, as such, are the intermediate link between activities and advantage and provide a clear distinction between internal and external resources. The view, therefore, relates firm performance to how the firm directors use their resources to obtain competitive advantages that can be sustained or not throughout the firm's business life.

Penrose's (1959)²³ when arguing about the relationship between successes or performance and growth theorized that, managers generally try to maximize the profits of the firm. Furthermore, she assumes that managers, rather than the owners, are in control of the operations of the firm. As such, she concluded, managerial capabilities, together with the role of the decision-maker (be it owner or manager, especially top management) play a critical role in allocating resources. The way these capabilities are developed will ultimately lead to successful performance.

2.3.4. Capabilities

This resource has been found to be more difficult to define than others often this is called invisible assets (Itami, 1987) or intermediate good (Amit and Schoemaker, 1993). But, in essence, these are the skills of individuals or groups as well as the organizational routines and interactions throughout which all firms resources are coordinated (Grant, 1991). Many disciplines have contributed to identify the role of capabilities. The contribution of economics to our understanding of distinctive capabilities serves as input and both broadens and narrows the definition. It broadens the analysis by importing factors which are not behavioral but which nonetheless contribute to competitive advantage, particularly emphasizing the role of strategic assets. On the focusing attention on characteristics of the organization that are both appropriable and irreproducible. This latter emphasis is missing in

²³ Foss (1997) researched 22 articles focusing and contrasting the view of RBV pioneers writers. His review exemplifies succinctly Edith Penrose pioneering contribution. He stated that “ Although the resource-based view of strategy first started to gather momentum in the mid-1980s, its roots go back 40 years. In 1959, the late Edith Penrose, an economist and professor at the University of London's School of Oriental and African Studies and at what is now INSEAD in France, wrote *The Theory of the Growth of the Firm*. In it she ventured out of the neoclassical economic model to explain the role of resources in the way companies grow. Described as "provocative and path breaking" in its challenge to traditional economic thinking, her advanced views were largely ignored by the mainstream at the time. Reprinted for the first time in 1995, her book is now seen as the chance for her views to "get the attention they warrant". Edith Penrose, and Philip Selznick who in 1957 first introduced the idea that companies possessed "distinctive competences", are widely cited as the original pioneers of the resource-based view of strategy, although many of the concepts involved can be seen in the work of others.”

the very wide range of distinctive competencies identified by Snow and Hrebiniak (1980). Studies on developing the capabilities necessary to obtain competitive advantage address the idea of the irreproducibility of capabilities that yield sustainable competitive advantage. Studies on the subject have been developed by a number of authors.

Other studies report that companies grow in the directions set by their capabilities and these capabilities slowly expand and change (Penrose, 1959). Empirical studies by Stalk, Evans, and Schulman (1992) observing the success of Walmart in its cross-docking system found that even though these giant started small and have the same resources (retail space, skilled employees and equipment) as other discounters (Sears, J C Penney), its unique capability to manage resources productively have made them stand out and become the best in the market. Day (1994) found that the best test of distinctiveness of a capability is whether it disproportionately facilitates the provision of superior customer value and delivers it better to customers in a cost efficient manner. Teece & Pisano et al. (1997) developed the term dynamic capabilities, a concept which identify not only firm specific resources but also explains the combination of competences, and the resources needed to be developed, deployed, and protected so as to achieve congruence with the changing (internal capabilities and external firm specific competencies) environments. Elements of the approach can be found in Schumpeter (1942), Penrose (1959), Prahalad and Hamel (1990) and Teece (1976, 1986a, 1997), and Teece, Pisano, and Shuen (1997:510).

Additional studies details that dynamic capabilities appeal is promising both for research and as aid to management sectors that need to gain competitive advantage in an increasingly demanding environment (Drew and Smith, 1997). Recently, some studies were done describing the growing interest in the role resource-based capabilities has on attaining competitive advantage (Collis and Montgomery, 1995; McGee & Finney, 1997). On the issue

of capabilities, a number of authors, Teece (1986) draws particular attention to the appropriability problem associated with innovation. Prahalad and Hamel (1990) are concerned with similar issues in the context of organizational knowledge while Barney (1991) stressed that many firms searching for competitiveness develop copycat strategies but mostly fail. For him, strategies fail because the potential copier cannot easily identify what it is that is necessary to copy. Grant (1991) also draws a number some of these topics together.

2.3.5. Distinctive competences

Barney (1986) affirmed that not all enterprise resources would be valuable to the development of competitive advantage. Those resources that do offer competitive advantage are referred to as distinctive competencies (Lado, Boyd and Wright, 1992). McGee and Finney (1997:69, 89) examined the role which distinctive competences play in attaining competitive advantage in a cross -section of 189 retailers in rural areas of Mid-western communities. Their research could not explicitly address the empirical issue of which unique capabilities allow certain small retailers to achieve competitive advantage. Thus, a number of authors have examined competitive advantages and competencies throughout the past three decades As early as 1957 Selznick was one of the first to describe an enterprise's distinctive competencies and relate it to specific reference to managerial qualities. Further along, Ansoff, (1965/1976, Learned, Christensen, Andrews and Guth (1969, 1987) and Hofer and Schendel, 1978), among others also studied the concept. Empirical examinations of the concept (Snow and Hrebiniak, 1980; Hitt and Ireland, 1985, 2000) generally conclude that the source of distinctive competencies are internal rather than external environments, and derive from the way an enterprise uses its resources relative to its competition. Additionally, these concepts can be applicable to both large and small enterprises (Stoner, 1987). Moreover, it is asserted

that success and growth within the small business is dependent upon the capacity of the owner to manage expansion within the limits of their resources.

Thus, the 'distinctive competencies' or the potential for development found within any firm include the financial, physical and human resources as well as the experience, leadership, ideas and control base of the entrepreneur (Gibb and Davies, 1992). While empirical studies abound around the resources found in large firms studies, these studies are lacking on analyzing the resources existent on SMEs. Mostly, it is found that small firms tend to lack key resources like technical and managerial skill, organizational adaptability and ability to acquire or use technology (Jones, 1992). It is expected, regardless of the economic times, that as the business growth cycle continues, the owner must learn to transfer their own expertise and knowledge to their staff. This addresses the need to organize the business as one "systems-based" structure that can successfully reproduce and maintain itself without the presence of the original owner. If this system is achieved, business owners will be able to allow for planning time and in the process be able to remain and retain whichever distinctive competences they might have gained. The profitability of a firm depends on both on the competitive advantage the firm holds relative to other firms in the industry, and on the profitability of the industry itself, much will be gained by identifying how firms obtaining and retain competencies.

Likewise, the Resource Based view focus on core competencies is increasingly being used to determine and explain why one company is more successful than others, though studies have been conducted mostly at corporate level. However, even though the usage of the RBV is believed to be applicable at the firm level, studies by Kesler, Koldstadt and Clarke (1993) published that within the business environment some firms are highly successful while others are not based on the competencies developed. These authors also

reported most small business are not successful because their owners bypass incorporating changes, new trends, and environmental analysis into their business cycle.

Prahalad and Hamel (1990:79-91) reached the same conclusions. Both authors stress that while successful corporations recognize, articulate and manage their competencies in order to establish a range of strategies for their current businesses, they provide, as such, new platforms for future business. These authors specify that the only and most powerful way to prevail in global competition is still invisible to many companies. Currently, it is stated that companies will be judged not as in the 80's by their ability to restructure, declutter and delay, but by their capacity to identify, cultivate, and exploit their core competences. Success, to the management of most companies, would hinge on acquiring competences. It is this researcher's intention to investigate if the findings posited above apply to Puerto Rican firms and if such is the case how changes in their vision can be instilled in them.

To exploit their competences firms must evaluate their resources and capabilities and understand their value for the firm. Understanding the relationship between resources and competencies is basic. Resources are inputs in the production process, whereas capabilities (often called competencies) refer to the capacity for a coordinated set of resources to perform certain tasks or activities. However, conceptually different, it is difficult from a measurement perspective to separate resource availability from the capacity to utilize these resources. Skills of individual employees are one type of resource that enhance the competitiveness of the firm. It could, however, be the case that these specific or related skills can also provide the competence of organizing other resources. Because of the aforementioned relationships, it may be unwise to separate resources from capabilities in empirical research on small firms.

For this thesis resources provide the basis for the firm to develop capabilities. Often

resources and capabilities are treated as a joint concept. Several typologies of resources exist in the Resource-based literature; however, categorizations may not be applicable to small firms. Winners in the global sphere (Teece, Pisano & Shuen, 1997: 515) are firms that can demonstrate timely responsiveness and rapid and flexible product/service innovation coupled with internal and external competencies. A rich body of literature pertaining to the RBV on competencies exists. In essence, studies suggest that firms that develop and exploit their distinctive competences outperform those firms that do not do so (Conant, Mokwa, & Varadarajan, 1990; Hambrick, 1983; McDaniels & Kolari, 1987) in McGee & Love (1999). However, these authors note that little empirical research exists focusing on the role distinctive competences play in providing a competitive advantage for small firms. Competitive advantages and distinctive competencies for successful growth, within any business is the product of a complex mix of variables, which are both internal and external nature. Such variables are often related to the available firm resources, which include all assets, skills, capabilities, organizational processes, attributes, and information under the firm's control that can be used to develop competitive positional strategies (Barney, 1991).

2.3.6. Competitive advantages

One of the main assertions of the RBV is its focus on the firm and on the need firms have to develop and to combine resources to achieve competitive advantages. Penrose's (1959) argument about the relationship between success and firm performance is that managers generally try to maximize the profits of the firm. This author assumes that managers rather than owners are in control of the operations of the firm. Therefore, the growth rate of a firm is limited by the rate at which the firm can obtain enough managerial capacity to manage these new assets, often referred to as the "Penrose effect". The Resource Based -View of the firm (Penrose, 1959, Grant, 1991) is closely tied to several concepts,

specifically the concepts of core competences and the treatments of intangible assets²⁴. This view stresses that the basis of competitive advantage is on the valuable resources and competencies the firm possesses. Competitive advantages attainment requires uniqueness in one form or another. This uniqueness could be per example, being the best price discounter or offering the most satisfying service. Foss (1997) found what is important is that a firm differentiates it from other firms and develops its own unique way of satisfying its customers' wants and needs. Uniqueness, it is argued, may be a necessary condition for achieving competitive advantage. Moreover, the tie between resources, capabilities and competitive advantages is mostly based on how one variable provides basis for another.

Other studies support the idea that for firms to sustain a competitive advantage they need to focus on the utilization of internal resources and capabilities of a firm (Rockart, 1982; Taggart, and Taggart, 1997; Gadenne, 1998) and in the rent generating potential needed to sustain competitive advantage. Penrose (1959:75) argues that: “ it is heterogeneity ...of the productive services available or potentially available from its resources that gives each firm its unique character”. She also states, a firm may achieve rents not because it has better resources, but rather because the firm's distinctive competence involves making better use of its resources.

As seen from the standpoint of the RBV view is also in terms of rents achieved (or income). As such, businesses are successful not because it has better resources, but rather that the firm's distinctive competence involves making better use of its resources (Penrose, 1959:54). Therefore, firm-specific resources may result in sustainable performance

²⁴ Even though the pioneer of this school is Penrose (1959, r1963), many other researcher like Wernerfelt (1984), Barney (1991), Grant (1991), and Montgomery, among others, have shown strong interest on the subject.

differences (Hill and Jones, 1989 in Hills & Narayama, 1990; Williamson, 1985/1990). Moreover, the importance of competitive advantages and the interplay between competitive advantage and distinctive competences has been analyzed by many studies.

Most studies on competitive advantages according to Love and McGee (1999) have focused on larger organizations (Snow & Hrebiniak, 1980) or in manufacturing (Acar, 1993). An exception was the study by Connant, Smart and Solano-Mendez (1993). These authors implemented a survey of 599 small apparel retailers and hypothesized that merchants with clearly defined strategies enjoy a competitive advantage, in part, because they possess relatively more distinctive marketing competencies. Yet, their study could not identify specific capabilities and activities. Applying this finding to current research might be worthwhile.

2.3.7. Sustainable competitive advantage

Recent studies (Barney, 1986, 1991) have associated the RBV to understand the sustainable competitive advantage of the firm. Some theoretical and empirical studies on the subject by Barney (1991), Grant (1991) and Teece, Pisano and Shuen, (1997) have found that competitive advantages, capabilities and the treatment of intangible assets as the best alternative to look at the 1990's and the future. The analysis of distinctive competences (Grant, 1991; Petts, 1997; Teece, Pisano and Shuen, 1997; Hamel and Prahalad, 1990) based on the RBV approaches to the theory of competitive advantage (Porter, 1985) point out the characteristics firms need for sustainability of competitive advantage, are durability, transparency, transferability and replicability (Hamel and Prahalad, 1990). A firm has a sustained competitive advantage when throughout time it performs better than rivals.

The concept of sustained competitive advantages gather relevance when we can

understand that competitive advantage does not lie in the products or services themselves, but in the resources and capabilities that produce them. To sustain a competitive advantage a company's own resources and capabilities must therefore be difficult to imitate, not easily substituted by other resources or capabilities, incapable of being rapidly developed elsewhere, and firmly attached to the company that deploys or uses them. If all of these covenants are obtained then the right mixes of resources and capabilities will be used and combined to provide the right products or services, in the right market, at the right time. As a result, if these goals are attained, the firm can aim to achieve sustainable competitive advantage and obtain above average returns. More importantly, in today's competitive environment, to sustain a competitive advantage firms need to, above all, provide value to customers. This value can either be cost advantage, services or differentiated strategies.

2.4. Relationship between strategic planning and organization performance

Consequently, the Resource-based view assumes the existence of a positive relationship between strategic planning and organization performance. Thus, this view assumes the need to achieve a balanced relationship between the firm's internal and external orientation. "Internal orientation depends on the organization recent history, current situation, past performance and analysis of strengths and weaknesses". This departure is supported by studies carried out by Venkatraman (1984), (1978), Lorange & Vancil (1977) are reviewed also by Kargar and Parnell (1996:5). Authors like Andrews (1971); Snow and Hrebiniak (1980); Venkatraman & Ramanujam (1987), on their studies of the RBV support the idea that "the external orientation is based on the ability firm's have to obtain reliable and timely information in order to learn about external environmental opportunities and threats faced by the firm" as supported by research contained in Kargar and Parnell (1996: 6-18).

Literature in the field fails to explain why some firms are consistently better than others in the same market with often-similar products (Petts, 1997). Even though some researchers say core competencies, are difficult to apply to small companies, what appears is that there have been no studies on small companies. Recent studies focus on the efficient use of human resources and most explain that the trend is toward using computers for R & D and continuous improvement and that this focus needs to be understood at all levels. Thus, this researcher based on the observance or lack of studies in this area is in the belief that researching the subject might explain the local competitiveness as well as the failures phenomena and potentially initiate a turnaround.

Relating the RBV to environmental changes, proposes, in its starting point, that environmental change is relentless and firms, through innovation, have considerable latitude in both influencing their environment and responding to changes. This view assumes that firms create and sustain competitive advantage because of the capacity to improve, innovate, and upgrade their competitive advantages. Penrose, (1959:79) avowed that environmental change might change the significance of resources to the firm. Strategy researchers emphasize that the fit between environmental demands and strategy have performance implications. Strategic choice theorists maintain that managers have the freedom to choose between different strategic orientations under the same environmental contingencies, i.e. strategy may depend on, but is not completely determined by, environment. Hence, managers in different firms may choose different courses of action. It is suggested that those firms that choose an appropriate strategy, in line with the environment will perform better than those who choose a less than optimal strategy. Firms that do not achieve consistency between strategic orientation and environment will be outperformed and eventually fail. In other words, in order for firms to achieve high performance, they need to adapt their strategies to

their environment and become proactive.

The RBV also contributes to the large stream of research on diversification strategy also argues and focuses on the effects environment has on firm's choices. One of these streams provides a theoretical framework for predicting superior performance for certain categories of businesses, diversification, among others. Most research has dealt into the strategic implications of the firm's internal environment, with issues of strategy implementation and analysis and with the organizational processes of major firms. However, threats and opportunities in the environment can lead to responses with either an internal or external target if the firm carries out or implement continuously environmental scanning²⁵. What is the problem of SMEs? Even though the environment changes constantly, many of these firms are often incapable of changing, the reasons might be quite varied.

Moreover, if the environment changes at a high rate, organizational reorientation is likely to be more frequent than if the environment is stable. The adaptation pattern has performance implications. High-performing firms are likely to reorient according to the environment, whereas low-performing firms reorient either too often, or too seldom. Dynamic environments, in addition, are characterized by instability and continuous change. Windows of opportunity arise from social, political, technological and economic changes. New product development, new marketing ideas, production or administrative practices are suitable strategies in response to dynamic environments. Consequently, understanding the firm as a system of unique activities (Penrose, 1959) which can be organized and sustained as

²⁵ Environmental scanning involves studying or interpreting changes and event that can negatively or positively impact the organization. Examples are sweep of social, political, economic, ecological, and technological events. Mostly the analysis is geared to spot trends and conditions that might become powerful forces. Also these can raise the consciousness of manager about potential developments that could be of considerable impact on his or her industry. Though speculative in nature, strategic planning helps management expand their planning horizon and (Thompson and Strickland, 2001:100) translate vague opportunities into options.

a result of the firm's capacity to mobilize, convert and exchange resources (Fransman, 1994, Garnsey, 1996) and recognizing the need to analyze the environment is critical to firm's success.

Furthermore, this theory does consider the role the external environment has on the firm performance and accepts that the external environment affects the position obtained by the firm. However, the internal environment is the contributing determinant for the CEO's decisions and for the firm to attain success. Yet not all theories analyze the effect of the external environment from the same angle. Other points of view tend to focus on resource accumulation as basis to implement the strategy, and see strategy as dictated by the conditions and constraints in the external environment according to the Industrial Organization model (I/O model). The Resource-based view suggests that a firm's unique resources and capabilities provide the basis for a strategy.

2.5. RBV and the importance of the entrepreneur/ manager

In the Resource-Based view perspective, managers are very important for firm performance. They are the responsible sector that selects the appropriate strategy in order to make the most effective use of the firm's resources and capabilities. Managers, under this view, are key in the overall process since they have to select an appropriate strategy to effectively optimize the firm's resources and capabilities. The extent to which core resources and capabilities are identified and exploited in appropriate ways by the firm's strategy will influence its performance. The extent to which core resources and capabilities are identified and exploited in appropriate ways by the firm's strategy will influence firm's performance.

In the resource based perspective (Penrose, 1995:32-35), also emphasizes the importance of the entrepreneur's image of the environment to the firm productive

opportunities. To her, the environment provides few restrictions on the growth of the firm. Increasing costs for resources and declining revenues for individual products are what may limit the expansion for the existent particular resources and products. The environment does not limit the firm to a fixed set of growth opportunities, rather, growth opportunities always exist to the extent that the firm has the resources to identify and exploit these according to Garnsey (1996: 3).

The heterogeneity of the managerial sector is a recognized element in entrepreneurial and management literature. Most research focuses, though, on a host of traits like risk taking, need for achievement. Yet, recently the emergence of cognitive approaches are geared to understand how entrepreneurs think and make strategic decisions Busenitz and Barney, 1997; Forbes, 1999). As such, if these cognitive approaches exist, then decisions will be based on strengths and weaknesses in different competitive environments and a potential source of competitive advantage (Barney, 1991). This pattern of analysis brings to light some studies on the way of thinking of entrepreneurs. This findings point out that entrepreneurs use heuristics more intensively than managers in larger organizations.(this refer to simple ways of solving problems of any nature).

The theoretical-empirical model presented and designed for this thesis is based on its starting point on the Resource-based view of the firm and the concepts undertaken by this theory. This model specifies how firm performance is determined by the effective allocation of resources, the capabilities and competencies possessed internally and the competencies developed. The role of the environment is posited on its externality to the firm performance. Nevertheless, the difference on the design model and traditional resource-based model is the strong emphasis this researcher sees on the capability and vision of the entrepreneur manager. The role is crucial if the firm is to attain an effective performance.

Penrose (1959), among others, suggested that owners and managers must first gain legitimacy and managerial capacity to compete effectively in the exchange process. In her classic economic work, she considers growth (which she equates to success) to be a process of diversification and efficiency. She argues that, as existing markets become less profitable and new markets become more attractive, firms are constantly pushing to see new opportunities beyond existing products. She also notes "history matters", "...growth is essentially an evolutionary process and based on the cumulative growth of collective knowledge, in the context of a purposive firm" (Penrose, 1995, p. xiii).

Hence, relating this view to the model designed, performance will strongly depend on managerial choices. Managerial choices is what based on the resources possessed exploit them to a point whereas optimization is attained. Even further, the manager's role will seek not just to exploit but also to constantly seek new avenues to invest these resources and develop capabilities into opportunities. Yet, choices will be ingrained on management experience prior to initiating the firm, on education and often on the personal traits and his or her background. All aspects will influence management practice and performance.

2.6. Synthesis.

After describing the theoretical framework selected for this thesis, defending the selection of this theoretical standpoint, revising the evolution and how the standpoint fares against other relevant theories, the principal aim of this research is presented. Likewise the chapter described and presented this research main objectives, questions, specific objectives and research hypothesis.

Though the resource-based view of the firm departs from the heterogeneity of not

only resources, but also that of the firm as a unique bundle of resources, designed in such a manner that each firm will delineate its strategy based on the resources possessed, seeking to exploit these resources and obtain new revenues. Thus, the firm will also, from this standpoint, convert its available resources into competitive advantages founding this on organizational routines.

Likewise, the resource based view perspective allows and contributes to the firm strategic direction. The firm, thus, becomes the unit of analysis, a firm with capabilities sufficient to determine its future goals and positioning. If the firm is to succeed this course of events has to analyze the background of the firm, its foundation, directives, and needs. Furthermore, as specified by Fernandez and Suarez (1996), the process school of the RBV as well as well as Porter's view on the content of the strategy is stressed, and also included this departure points. Nevertheless, though the RBV does present and analyzed the role of the manager in determining and achieving successful performance, a fact the Penrose (1959) considers the bottleneck to success, the view remains short on signaling how firms with different resources lack the capabilities to attain success.

Hence, the chapter three will address the standpoint this researcher sees as a necessary condition to succeed. This, to this researcher, is considered an expansion on the resource-based view. The next chapter will discuss how theoretical and empirical research focus not only on understanding the mechanisms that instill competitive advantages but also, mostly on other aspects related to the view that are not traditionally analyzed with the strength due. This researcher considers these aspects paramount focus of analysis in a changing and competitive environment under which firms today evolve.

As such, studies that acknowledge the role the environment plays in contravening or

not decision-making, the role of the entrepreneur owner in determining with his or her capability firm success and the general conditions underlying success will be discussed. Lastly, acknowledging, in lieu of the increasing role of women into the labor force, if success to the firm is gendered and or determined by the sector in which the firm evolves. Thus, a model of the resource based view specifying this researcher propositions is presented in chapter III.

CHAPTER 3

THEORETICAL FRAMEWORK: REVIEW OF EMPIRICAL RESEARCH UNDERLYING THIS THESIS ADJUSTED RBV MODEL: SUCCESS, SECTOR, GENDER AND SIZE

3.0 Introduction

This chapter presents not just how many authors have linked the Resource-based view theoretically and empirically, but it also focuses on how this view serves as basis for this thesis. Specifically, this section analyses aspects less directly addressed by the RBV. Furthermore, it, introduces, and relates the RBV with the model chosen for this thesis with its pro and cons and provides a synthesis to how the concepts relates to each other. A defense of the alternatives chosen is also presented here.

The RBV with the underlying theories does answer to how firms, based on internal analysis, are able to use its resources as sources of competitive advantages to succeed. But, the view does not answer clearly how small business owners can choose resources in an optimal manner, nor how they can allocate these resources in the most appropriate way to obtain above average returns. Moreover, the view does not specifically answer to how, because of educational limitation, time scarcity, and often financial limitations, many SMEs that could be successful or had the potential to be successful fail to succeed. This researcher addresses this thesis objectives by attempting to explain and incorporating into the model several other aspects not directly reviewed under the RBV standpoint: the relevant role of the

entrepreneur and how he or she exploits firm's resources across time, the underlying aspects for his or her choices, the factors that determine success across firms as well as barriers that impede attaining success. Additionally, the variables surrounding his or her business decisions within the environment in which the firm operates are also addressed. Moreover, in lieu of the ever-growing incursion of women into the marketplace, analysis focuses, on investigating if firm performance differs across gender.

The resource-based view focuses mostly on how firm exploit their valuable, rare, and costly to imitate resources and capabilities to generate economic rents. Yet, many have considered this view too static. As such, evolutionary scholars (Theorists like Teece and Pisano, and Shuen, 1997, and empiricists like Barnett, Greve and Park, 1994), which Barney (2001) calls the new resource scholars, have focused on another aspect, on how the capabilities change over time as well as the competitive implications of these changes. It is precisely on this evolutionary view where the aims for this dissertation, illustrated by the theoretical model rests.

The model designed and incorporated for this thesis highlights significantly and integrates the manager's role into the key overall decision-making process. It also explains how this key person by optimizing the resource allocation and exploiting these resources might ultimately determine firm performance and obtain above average returns. Moreover, the model explains how key resources possessed, if well exploited will provide the competitive advantages and competencies that, if sustained across times will position the firm above competitors. Furthermore, the described model integrates the role of the environment and how changes in it, including the sector or industry in which the firm operates provides either positive opportunities or hinder the attainment of the set goals and strategies. In addition, the model specifies, under the strategic choices section, the standpoint that for this

thesis determines firm performance: traits of the manager, business characteristics and the strategy chosen, which depending on the existence of, allocation, and resource exploitation will determine the avenues necessary for a firm to succeed. All the aforementioned aspects become the conditions necessary for a firm to survive or sustain whichever performance level it reaches.

Undeniably, the role of the entrepreneur, from this standpoint, is given solid consideration. Particularly important are his or her capabilities to exploit resources, analyze the environment and innovate, based on personal and educational characteristics. Emphasis, particularly, resides on the manager/owner capability to develop resources that will add value to his firm, to project this value, and to develop enough factors or criterion that will provide market value to the firm. Spanos and Lioukas (2001) argue that both Porter and resource-based perspective scholars agree on the importance of reaching an attractive position or competitive advantage as a desirable outcome.

Several authors including Barney (1991), Peteraf (1993), Conner (1991) has examined the relationship between the resource-based view and strategy-based theory of industry determinants (SCP). Other authors have empirically researched the relationship like Rumelt (1991). Yet, Barney (2001:647) specified that research findings support the idea that, overall, firm effects seem to be larger than industry effects. Barney (2001) refers to his own study with Arikian, and concludes that firms that build their strategies on path dependent, causally ambiguous, socially complex, and intangible assets outperform firms that build their strategies only on tangible assets.

Moreover, from this analytic perspective, if the entrepreneur makes the correct allocation of resources and selects the most appropriate strategy for the firm, performance

will be significantly enhanced. If the contrary occurs, failure will result. To clarify, the RBV does consider the role of the entrepreneur, and even though Penrose (1959), consider it as the bottleneck, and Fahy (2000) considers it very important, to my belief the role is much more crucial. I consider it, central to the firm performance and to obtain the added value so look for by consumers and the firm publics.²⁶ Penrose (1959:39) writes, “ The ‘productive opportunities’ of a firm comprises all the productive possibilities that its ‘entrepreneur’ see and can take advantage of.”²⁷

From this standpoint, in addition to the managerial role, the size, sector in which the firm operates and gender might play a definite role on firm’s performance. Likewise firms need to reach a certain size to perform adequately. Though the RBV considers and focuses on the internal environment as key to success, this thesis will, in addition, focus, though not to a large extent, on the role the external environment plays on firm performance. Why? Because it is my firm belief that firms cannot and do not operate in a vacuum, on the contrary. A firm needs to operate understanding and analyzing its internal strengths but always ensuring and having knowledge of the external changes that can derail plans. This awareness, when combined with pro-activeness will provides for success attainment. Thus, we researchers need to go farther and seek further answers as to what determines success and what allows firms directors to remain successful.

In consequence, small business owners/entrepreneurs are important from many respects, and not just for job creation. Their perceptions of their business future irrelevant of the sector in which they are provide a balance and GNP generation. According to Piore and

²⁶ Firm publics refer to all sectors to which the firm is responsible to, be it investors, government and consumers.

²⁷ The term entrepreneur within this context differs from that of Penrose. It refers to the creator who forms a business from scratch not to only to the individual or groups within the firm providing entrepreneurial services, whichever their position might be.

Sabel (1984), the number of small business formation is a function of the economy. These authors claim that in a growing economy with high monetary returns, business owners will be more optimistic and they will continue their businesses or invest in new business ventures. When the economy is declining, on the contrary, business owners will be more pessimistic and reduce their investment in either new, existing businesses or services. Based on their theory, the decisions of whether to continue existent businesses, investing in new ventures, or divesting old businesses, will respond to the economic environment.

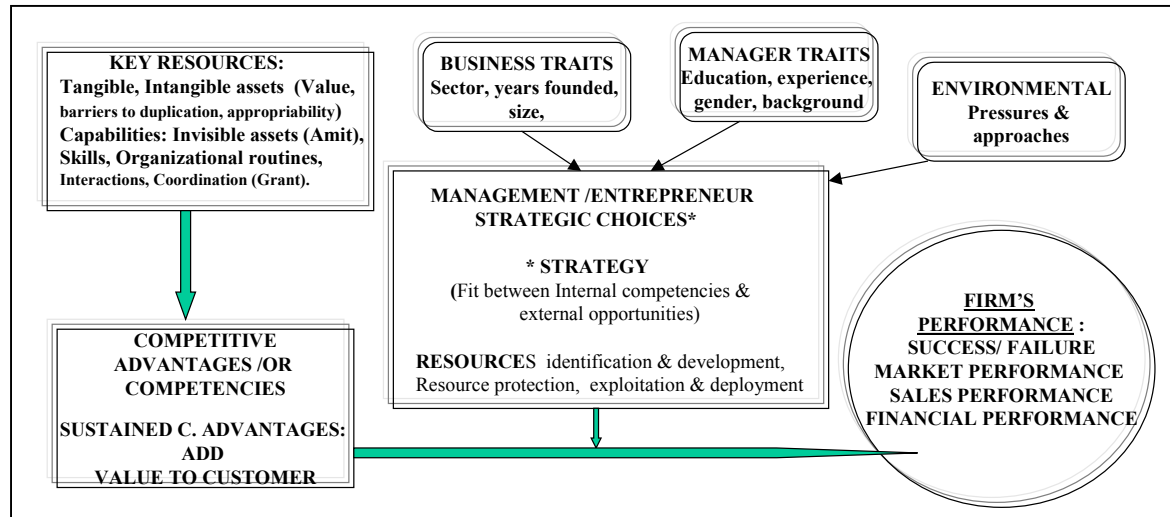
Precisely, this dissertation proposes and examines the external environment as an added determinant on firm performance. Similar conclusions were reached under the population ecology theory. The aim of this section is, in addition, to inter-relate the subjects underlying this research not only to the resource-based view, but also to visualize how the existence of resources, competitive advantage has been found and studied as performance determinants in other firms and contexts. More importantly, the review of literature, of empirical studies, and how these relate to the topics analyzed from the perspective of the RBV are discussed not just, in terms of how they influence performance, but also on which aspects either of internal or external nature affects firms across sectors.

3.1. Theoretical framework model underlying this research

The perspective for this empirical research is described on the model (figure 3.1), which describes the relationship between the variables, and how they relate to the chosen theoretical standpoint, the resource-based view. This model focuses on understanding the conditions that promote business survival and success and how the competitive advantages and distinctive competences existent in successful local firms could assist SMEs and policy makers to device guidelines which could be utilized as success stimulators and demise

deterrents. The model presented explains the importance of the entrepreneur and the environment in attaining success. Explanations for each variable are described.

Figure 3.1. Modified resource-based view model underlying this thesis



Source: Researcher’s design based on literature review and Fahy (2000) and Grant; (1990) resource-based view models.

This model is designed partly to explain the number of failures observed in our market, which posit the idea of studying why firms demise occur as well as examining if the reasons behind this occurrence are imbedded in the culture or if they are isolated events. A further reason, is the growth not only in Puerto Rico but worldwide of studies on organizational survival from the 1970s to the 1990s. Likewise studying SMEs is mandatory specially, when considering the trend towards mergers, acquisitions, as well as the downsizing that predominates in today’s economy. Similarly, Entrepreneurship has become the dominant paradigm (Peteraf, 1993) of these economic times, a time whereas the role of the owner becomes more prevalent.

Entrepreneurship and the RBV both focus on the heterogeneity of resources and see the role of the entrepreneur as a necessary figure for the strategy to be designed and implemented. He or she under this view is central whatever is achieved in the organization. His or her vision, risk taking, and analytic standpoint is what will guide the choice of

strategies which will allow exploiting resources to attain superior value and performance. Though some researchers are of the opinion that the RBV focuses on the heterogeneity of resources, there are not enough studies focused on the real aspects of how success is attained. To many, there is still a need to create specific boundaries that will establish the fields of entrepreneurship legitimacy and distinctive contribution (Busenitz et al., 2001).

A further justification for the model is to answer queries as to why some firms succeed while others fail. More importantly, the model foresees the relationship of the different concepts analyzed as fundamental for this thesis. Additionally, though this model is of personal design, it is also based on theoretical standpoints proposed by Hitt and Ireland (2000, chapter. 2), and Fahy (2000) as well as Grant (1990). It also rests on traditional resource-based theories as interpreted by this author. The relationship among the variables pertaining this study and the way the independent and dependent variables tie to firm performance conforms appropriately to this researcher view of the relationships (relate to figure 2.1 in chapter 2).

What's more, under this model, the resources choices and allocation determine success to a firm, this in turn, and based on the owner/manager decision maker, are allocated according to choices in order to provide advantages to the firm. Moreover, these advantages are obtained based on how the decision maker, the entrepreneur, in lieu of his or her capabilities makes the right choice of resources and allocates them in a manner that can provide advantages. Ultimately, if the choices permit the exploitation of these resources in an above average manner, areas of strengths and opportunities will arise thus allowing the firm not just to survive but to succeed.

Needles to say, these resources themselves, (Kay, 1993) only become a competitive advantage if applied to an industry or brought to the market. Hence, Williams (1992) described, appropriately, the managerial role as the person converting resources into something of value to customers. This role is determined by his/her choices, which are based on the capabilities, experience, knowledge and human resource capital, capabilities are developed to optimize resources utilization. Most advantageous results to the firm are, therefore, achieved on the basis of information, vision, flexible planning and risk taking abilities of founders. Accordingly, success is also a matter of selecting and making the right choices. Additionally, performance is the dependent variable whereas gender, size and sector are control variables. All other variables are independent.

The model designed also aims at explaining what determines success or failure. In the specific case of this study, these explanations are quite significant since knowledge about why some small firms perform well and grow while others and what determines success or performance is almost nonexistent, especially in the case of Puerto Rico. It is important, also, to gain knowledge about which factors affect success or failure and how to overcome them. Some studies relate that prior sector experience is a factor that is commonly believed to enhance small firm performance. Studies by Hamilton (2001) found that planning, education, and innovative practices of founders influences performance. Nevertheless, we need to know much more. However, small firm success, performance and failure are areas that have been studied from a multitude of perspectives.

3.2. Concepts underlying the theoretical framework/ model

The entrepreneur. Under the model presented for this thesis, (figure 3.1) firm performance depends on the entrepreneur's choice of a strategy. This choice is itself

determined by the traits, decision-making abilities, and risk taking of the manager owner who, based on the resources possessed allocates them in a way that is conducive to attain the strategy chosen. If the abilities of this central person are excellent, he or she will position the firm to distinguish itself from other firms in the market and at an advantageous position. If not, the firm will falter. Reaching an advantageous position early in the life of a firm will allow projected competitive advantages valued by the firm clients and success. Results from this decision making process, as well as the conversion of these resources into capabilities will lead the firm to attain performance and above average returns. In consequence, success for any firm is the result of the owner(s) and entrepreneur 's experience and management practices, the decisions made regarding the firm's growth, and the environmental or external opportunities and barriers faced. Thus, the role of management becomes tied to environmental opportunities (or barriers) in whichever sector the firm is becomes crucial to success attainment.

As such, for managers to achieve their plans effectively, they need to scan the environment constantly, have a vision and plan proactively and innovatively. In typical entrepreneurial literature, it is generally believed that due to time scarcity and often poor education, an ample number of SMEs base their decisions mostly on mental framework, on contingency planning and gut feeling. Mostly for small firms in any organization time to plan is more sporadic and anemic. Nevertheless, some researchers like (Williams, 1992) believed that though SMEs do not tend to report doing written plans, they actually do carry on mental planning. To this author, not planning constantly does necessarily hinder success. On the contrary, there are other ways to plan, including budgets, that allows firms to reach goals. Empirically, and through reports in popular magazines, many successful entrepreneurs have accepted that they did not prepare business plans at founding time. Remedy was

implemented later, though. In the specific case of some of the firms studied for this thesis, contingency planning²⁸ and constant updating their goals, and reacting to on-going events appears to have rendered outstanding results. The opposite has happened to some firms. Thus, planning is inherent to success, and whichever goal is delineated; success is achieved more profoundly with clearly defined mission, objectives, and with purposeful, flexible and coherent planning. Hence, planning implies constant research, updating, and incorporating changes that could lead team to higher levels of performance.

3.3. The role of managers/entrepreneurs

This role has been under analysis from many angles in Entrepreneurial theory. This analysis goes from new venture creation to established businesses and from successful to non-successful businesses. This thesis deals with established business. However, when describing the new venture creation process, entrepreneurship also recognizes the significance of resource decisions. As such, Entrepreneurship sees the establishment of a business to a process quite similar to a new venture creation, including its pros and cons. It is argued that a new organization emerges when a motivated entrepreneur envisions an opportunity for new possibilities, acquires (Bruno & Tyebjee, 1982) and commits resources to a particular strategic purpose (as in Stevenson (1986) reporting an earlier study by Stevenson & Gumpert, 1985).

In established firms as well as in new businesses, the owner establishes procedures for the usage of resources, per example new venture creation. This process like that of managing an existing business is one of “organizing” (Gartner, 1985:698), of creating interactions of resources, boundaries, and of stated or implied intentions among relevant agents and more

²⁸ Refers to planning activities done when the situation or problem arises.

than that, “it is to assemble ongoing interdependent actions into sensible sequences that generate sensible outcomes” (Gartner, 1991:232). Once the business is established, as the cases analyzed here, the entrepreneur, owner and decision maker transform his or her vision of business and goals into a viable entity comprised of a unique bundle of resources invested in a strategic purpose (Penrose, 1959). The specification, identification and acquisition of resources are central to the success the enterprise might obtain and for the accomplishment of goals. As Amit and Schoemaker (1993) stated, deploying the firm resource base is a managerial role. Yet the key managerial task is the effective deployment of resources in the marketplace. Barney (1986a) proposed that developing a match between resources and the success factors of a firm or industry is a demanding task and this success would depend on the accuracy of managerial expectations about what is the real value of the strategy. As such, not only is management’s role crucial but also in itself it is the most pervasive source of competitive advantage. Ultimately, this advantage could lead to above average returns (Castanias and Helfat, 1991).

Thus, management’s role is present at all stages of the firm development and actions. During the organizing process, entrepreneurs will make judgments about which resources are more or less important, then acquire and use those that they believe best fit their organization. This role, in the case of entrepreneur will depend on what the he or she sees in the environment and the amount of productive services with which he or she is used to operate (Penrose, 1995:215). Generally, it is believed that resource choices are made early in the life of businesses. Thus, the combinations of resources that might yield advantages depend on the choice made, which often are based on risk uncertainty, and might, as such, have either positive or negative outcomes. Likewise, a study by Brush, Green and Hart (1998) from 487 small firm from data collected by The New Jersey Small Business Development Center,

established and reviewed the process of developing resource combinations involves several and sometimes simultaneous steps:

- Specifying or determining which resources are important (Stevenson & Gumpert, 1985)
- Identifying potential resource providers (Hart, 1995)
- Attracting resource partners (Vesper, 1990)
- Engaging resource partners and determining terms of ownership, control or distribution (Hart, 1995)
- Allocation or deployment of resources (Churchill & Lewis, 1983)

Moreover, the same study points out that decisions regarding which resources to acquire are primarily that of the founder/entrepreneur (Vesper, 1990), and the selection depends on their perceived importance as well as on his/her expectations for the future of the venture (Penrose, 1959), intuition, ingenuity (Penrose, 1959) or a systematic assessment of resources (Barney, 1986). This citations exemplify and backs up the importance of the manager /owner/CEO in firm performance at any stage.

Other studies signal that many factors including some of external nature will influence the entrepreneur's decisions. He or she will attempt to fit the combinations of resources to the significance and implications for the growth of the venture (Penrose, 1959) and to the industry and environment (Miller & Shamsie, 1996). Managers or firm owners' based on their knowledge, education, and experience, which in terms determines their capacity to act, will decide among courses of actions. The logical decision is expected to be choosing the best options in order to attain or remain successful in whichever environment they are. Nonetheless, often this is not so simple because often internal issues impede decisions, i.e. expected returns, and availability of resources when opportunities surface. Sometimes the environment has a role.

Therefore, success to any firm will depend not only on the existent resources, but also on the capability of management and how adept management is to instill and foresee changes. Managers, as such, will make decisions based on the content²⁹ and knowledge they possess of the situation. Furthermore, since many firms can possess similar resources, it is the decisions taken by management, which in terms depend on managerial capabilities that will make the difference. Therefore, it is up to management to exercise those choices to his or her utmost. Opportunity seeking and environmental pressures will be weight heavily on managerial decisions. But, if management uses knowledge to advantage optimization of resources can be obtained. Thus, once management uses effectively firm's resources, train and stimulate personnel to participate in the managerial process, competitive advantages could be reached on all ends. All the same, to be able to foresee and implement decisions requires constant updating, scanning, optimal consumer satisfaction and differentiation. Additionally, if decisions are appropriately done advantages will be projected and perceived by the interested publics. It is this researcher's belief that to make optimal and timely decisions management scans the environment continuously, needs to plan in order to optimize resources and take advantage of opportunities.

3.4. Success and failure determinants

Key success determinants for SMEs are important determinants of competitive advantages. Therefore, studying which variables determine performance and how success is attained is as relevant as studying managerial role in success. If success³⁰ is understood as achieving a sustainable competitive advantage that in turn is founded on customer satisfaction and financial performance (Doyle & Wong, 1997:516), then attaining success will be a goal

²⁹ Strategic content is the decision process resting on examination of the firm resources and capabilities.

³⁰ Success means attaining a competitive position (s) that lead to superior and sustainable financial performance. Effort to understand success rests on the theory of the firm and associated theory of strategy.

of any firm regardless of location, size or gender of founder. Even though small firms appear to be a vital part of the economy, the prospect for any individual firm is uncertain. Many small firms die during their first years of operation, or struggle to survive. The number of small firms that achieve large economic returns for their owners and grow substantially is limited. Further studies by Gadenne (1998) suggested that the success of a firm is due to the way it utilizes its internal resources and not due only to the strategy it chooses, the environment in which it operates and to the combination of resources it makes, but also to the entrepreneur and managerial characteristics.

Table 3.1, presents variables that according to empirical studies contribute to and identifies causes of success or failure.

TABLE 3.1. Variables contributing to success or failure

VARIABLE	CONTRIBUTING TO SUCCESS	CONTRIBUTING TO FAILURE
ENTREPRENEUR (PERSONAL QUALITIES)	1) Capacity of Leadership (enthusiastic and dynamic)	1) The lack of a real leader
	2) Decentralized and former of a good team	2) Not having or controlling a good team
	3) Socially skillful and diplomatic (good in 4) Good devisor (risk taking) and having adequate ambition networking)	3) The lack of emotional balance
	5) Ambition of economical and professional independence	
	6) Good controller of his team	
	7) Being self-confident and trust on his business	
	8) Having the correct age and better if parents own business	
	9) Having the sufficient marketing and creativity skills	
	10) Emphasize unique accomplishments over the Stability and well being of the group	
	11) Having the capacity of meeting adequate partners	
	12) Having high tolerance of ambiguity, persistence, and perseverance	
	13) Being and communication abilities, and with creativity enthusiastic and dynamic, with high networking	
	ENTREPRENEUR PROFESSIONAL (QUALITIES)	1) Experience and knowledge of the industry and of the products and of the market
2) Having basic entrepreneurial education and performing it continually		2) The lack of knowledge in entrepreneurship
MARKET & PRODUCT STRATEGIES	1) Having an exhaustive study of the market (concurrence) and customers)	
	2) Orientating market needs (niches well identified, big enough for being profitable)	
	3) Having an unique innovation	
	4) Having defensive and/or offensive strategies Prepared for surviving	
	5) Choosing the right market for the right product (attractive and highly dynamic could be perfect for one product but causes of failure in others)	
	6) Compatibility of the new venture with the company's image, culture, and product experience	
	7) Innovate the product continually	

Source: Researcher's elaboration based on general literature review and Lussier 's (1999) studies.

Needles to say, mostly it is taken *ceteris paribus* that reasons for failure taken in the opposite dimension create success. While revising a study by Beckman and Marls in 1996, Costa found that the former found business experience was a major factor in the success of SME's. Moreover, Costa (1994:32-34) in his own study indicated that strategic planning contributes to long-run success (Shonesy & Gulbro, 1998). Shonesy & Gulbro, also made reference to studies by Ibrahim and Goodwin (1986:41-50), Montagno and Kuratko (1986) and Hofer and Sandberg (1987). Shonesy (1998:6) asserts that, " appropriate management and financial planning as success predictors are predictable measures of success." The

studies mentioned above examined environmental factors and entrepreneurial characteristics as factors in success. The categorization of the factors that instill success has also been seen from various authors' perspective. Mostly research can be seen from a theoretical and empirical perspective. Both sectors will be dealt, but emphasis will be on empirical research. The following, table3.2 summarizes studies on the field.

TABLE 3.2. Variables contributing to success, across areas

	Stuart & Abetti(1985 & 1987) Abetti & Stuart (1985 & 1990)	Plaschka (1985)	Sandberg & Hofer (1987)	Keely & Roure (1990)	Mc Dougall& Robinson & Denisi (1992)	Cressy (1995)	Lussier & Corman (1996 & 1995)	Composite Rating
Category								
Subcategory								
Market								
Attractiveness	X							1
Dynamics								
Innovation								
Uniqueness	X							1
Strategy								
Planning			X	X	X			3
Aggressiveness, clarity	X		X	X	X			4
R&D intensity	X			X	X			3
Market intensity				X	X			2
Compatibility				X	X			2
Industry Structure			X	X	X			3
Interaction strategy/Industry			X	X				2
Organic emphasis	X							1
Use of professional advisors							X	1
Financial								
Record keeping & financial control						(X)		1
Capital						(X)		1
Leadership								
Parents owned business							X	1
Entrepreneurship	X			(X)		X		3
Experience		X	(X)	(X)		X		4
Social influence (family)		X				X		2
Education		(X)				X	X	3
Teaming				X		X	X	3

Key: X, significant importance, positive correlation; (X), significant importance, negative correlation.

Source: Constructed by researcher based on Lussier's (1999) studies recollection.

3.5. Studies on failure, a synoptic review

Failures or organizational death occur when a firm or organization stops performing those functions that are expected of it (Sheppard, 1994); the organization is unable to “ make a go of it” (Cochran, 1981). Manifestations of death are many: a firm fails to pay debts or obligations, files for bankruptcy either in chapter 7, 11, or 13. Small business research has examined most often the reasons why businesses succeed (Shonessy & Gulbro, 1998),

however in lieu of the increase in failures, reason for failures also need to be examined. Gaskill, Van Auken, and Manning (1993) wrote, understanding the reasons for failure will allow policy-makers, advisors and lenders, among others, to better serve small business. It is this researcher's belief that knowing these reasons will assist new entrants and business in general to prevent failures. Additionally, there is no generally accepted list of variables distinguishing business success from failure. The two most commonly causes or reasons are the liability of newness and smallness (Singh and Lumsden, 1990)³¹. Aldrich and Auster (1986) believed that the coupling of the two problems causes the non-survival rates for small businesses to be quite high. Other studies report that two distinguishing variables found are capital and management experience.

A revision of 22 journal articles (Lussier, 1999) only 14% (64%) reported the existence of the variables mentioned (See Table 3.2 which presents a review of literature on the subject), including the 15 variables that mostly contribute to success or failure and the explanation for its codes. Also, in a study of 100 firms in New England states in the United States, the same author (Lussier, 1999) reviews the major reasons the firms studied identified as those causing failure: under-capitalization and high fixed costs (32%), slow economic activity (30%), creditor problems (23%). Slow account receivable and other issues received a lower than 8% response rate. Studies on the liability of newness (Sing and Lumsden, 1990) found out that a major reason for failure is bad management (Argenti, 1976) and managerial inadequacy, incompetence and inefficiency, the lack of specific business skills, and the ability to plan (Shonesy & Gulbro, 1998). Lussier (1999) in a service industry model reports

³¹ Liability of newness is the propensity of new organizations to have higher failure rates. Some of the problems are lack of networks, difficulties in running the organizations, and increased risk of mortality as well as lack of experience to operate a business (Dyke, Fisher, & Reuber, 1992). Liability of smallness assumes the organization size influences organizational mortality. Examples of such studies are lack of financial and human resources, which can create a distinct disadvantage.

that the variable “planning” states that people starting a service firm with a specific business plan have a greater chance of success than people without a specific plan.

Studies by Dun and Bradstreet and Bruno & Leidecker (1988:50-58) suggest that failures can be better understood through analysis of the underlying causes and performance indicators that identify symptoms of eventual demise and that financial predictors can explain failure but they do not identify the causes of failure. Other studies show conflicting and inconclusive results on failure rate (not causes) due to differences in the data used (Haswell & Holmes, 1989), the locale studied and the numbers of businesses represented. Some studies confirm that business failures can be as high as 80% during the first 5 years (Bruno & Leidecker, 1988) while studies by Timmons (1994) found a lower rate. To these authors, failures are considered more relevant than successes and are mostly found to be due to management inefficiency (Argenti, 1976; Dun & Bradstreet, 1993).

Currently, and as the 21rst century crisis evolves more firms might fail. However, failure is not always running into high debt, cash crunch or depletion, and filing for bankruptcies. Failure of diverse nature is happening by the hundreds in the recessive economy of nowadays. The number of firms that had to restructure their business, retrench or downsize or recapitulate or have asset liquidation is enormous. This does not necessarily means failure. A large number of firms attest to that; some firms survived and others did not. As the economic situation worsens, contrary to economic growth situations, more firms might experience financial crisis or failures.

Dennis (1993) while studying business failures found (1993) that business failure rates average 70,000 firms annually, with liabilities around \$40 billion annually. Nevertheless, some ecologists relate business failure to firm density (Fernández and Suarez, 1996). Those authors see failure as natural and even desirable phenomena similar to

Darwin's survival of the fittest. Examining Schumpeterian philosophy (Schumpeter, 1934) asserts that when small businesses are unable to compete with successful new firms, older non-innovating firms and unsuccessful new firms suffer losses. Also, that new investments are halted because the economy is disrupted and it becomes impossible to make reliable calculations about the future. The possibilities offered by the current cluster of innovations are exhausted. Interest rates rise. This is the first phase of Schumpeter's four-phase model, Prosperity. The subsequent downturn is the second phase of the cycle - Recession. The decline of Recession continues however, past equilibrium in a secondary wave, which the former attributes to "errors, excess of optimism and pessimism. Reckless, fraudulent and otherwise unsuccessful enterprises created in the optimism of expansion cannot stand the test administered by Recession" (Schumpeter, 1934).

Researchers like Pearce and Robbins (1994) have proposed to study firm decline; their model portrays turnaround process as a discretionary managerial action taken to arrest the performance downturn and stimulate recovery (Lawrence and Jones, 2001: 105). Of course, alert firms can anticipate economic decline if they respond to internal and external pressures that threaten its long-run survival. Example of such decline being lowered sales, accumulated inventories, lack or slow payments and often exodus of key personnel. Trans World Airline in the US is example of a firm that entered bankruptcy procedures to correct their debt structure and level after a leverage buyout but did not survive (Setton, 1999). Greyhound bus a line is a corporation that was badly affected by the increase on air flights competition (Fortune, April, 1999:48-52) submitted to this procedure and rebounded successfully. Currently with the air scare this firm is profiting exorbitantly. Continental Airlines is another firm that did undergo the process and did quite well. What lies ahead for firms in the future and those that went under the process is unknown. What is known is that not always firms could be considered failures for undergoing the process.

3.6. Growth as a process of changing size.

It is possible to use different indicators for the growth of a firm. A growth process is likely to be driven by an increased demand for the products or services that the firm supplies to the market (this is the case of one of the firms studied on the qualitative research) or by a need to increase production or size in order to obtain economies of cost or scale. That is, sales increase first, and thus allow the acquisition of additional resources such as employees or machinery. It seems unlikely that growth could take place in another dimensions without increasing sales. However, it is also possible to increase sales without acquiring additional resources, examples of which is outsourcing whenever increased business volumes occur. In this particular case, only sales would increase.

Studies by (Chaston and Mangles, 1997:48-49) in different countries address the idea That, the characteristics exhibited by firms that grow are almost similar to those identified by successful firms. Also, the same study contrast findings that highlight the significance of small firm growth from diverse authors (Coopers and Lybrand, 1994 reports on studies carried out by Burns, 1994 in the UK; by Brickau, 1994a in the European Community the German studies, and in New Zealand with export firms Tradenz, 1990). All the aforementioned studies aimed at predicting growth potential of firms based on the internal capabilities of the organization. Since the researchers used large samples, pilot tested their methodology and collected ample qualitative data; results might be enlightening for this research. Common determinants were found among this studies and signal which characteristic are needed in firms that exhibit growth: flexible decision making, offer superior quality products in niche market and differentiate themselves from competition, introduce new services frequently, recognize the need to invest in the continual development of their employees, and utilize clear business plans to guide actions, among others, Chaston

and Mangles (1997: 48).

Doyle and Wong (1997:517) in studies made from samples drawn in the UK, USA, Africa, the Far East and Australia, showed no significant differences exist on whether firms were trading off future market performance for short-term financial performance, taking this as a measure of success. However, the same studies did find that a market orientation based on customer satisfaction was the best indicator for building customer preference. In addition, their study found a strong correlation between marketing and business performance. This signal that, to ensure success managers depend crucially on its ability to create a differential advantage. This does not mean that marketing is a quick panacea for success.

3.7 Studies marketing and its role on success and firm performance

Brooksbank, Kirby and Wright (1992), strongly indicate that better performing companies give a higher priority to environmental scanning and development of strong marketing than to other business functions of their business or strategic plan (depending on the firm's type of planning level) and to the philosophy of being customer driven. Drucker (1999) argued that the factors mentioned above, joined to appropriate marketing tools, would prevent failure and decreased market positioning for firms. Previous research by Peters and Waterman (1982) strongly indicate that better performing companies give a higher priority to environmental scanning and development of strong marketing than to other business functions in their business or strategic plan (depending on the firm's type of planning level).

Studies of diverse nature also compare performance and success to the content of the firms mission statements. A study by Pearce and David (1987) concluded that higher performing companies among the Fortune 500 firms had comparatively more comprehensive mission statements than the rest. The conclusions were based on an analysis of the content of

those firms mission statements. Based on their report, firms whose mission statement included references to target market, principal products or services, geographic domain, and core technologies did outstandingly. The most salient those firms which suggested their philosophy, self-concept and public image. Even though most studies are linked to large firms, the abundance of small firms and the definition Small Business Administration has of a small firm as one of up to 500 employees regardless of size, have grown substantially and financially.

3.8. Studies on the performance of women versus men-owned businesses

Both empirical and theoretical literature present conflicting evidence regarding the financial success reached by women-owned businesses. Some studies comparing women's businesses to men's found that on the average, female-owned generated lower sales revenues, even after controlling differences in industry experience, size and sector. Studies by Cliff (1998); Loscocco et al. (1991) concluded that gender in itself might instill business underperformance. Other studies by Kallerberg and Leitch (1991) and Fischer et al. (1993) did not find significant differences on performance indicators like business survival, growth in earnings and financial soundness.

3.8.1. Studies that equate small firm growth and success with size and gender

Many firms, measured on returns on investment and profits obtained, seek success. However, successful small firms do not necessarily grow. A firm may exhibit negative cash flow and low return on investment during an expansion or consolidation phase. Also it is feasible that some small firms on purpose trade off survival and short-term profits for long-term growth. Literature has identified two principal problems that explain the failures of

small businesses: the liability of newness (Singh and Lumsden, 1990)³² and smallness.³³ . Bradley and Ruback (1999:32) in his studies found and assumed that organizational size influences organizational mortality. Aldrich & Auster (1986) in Aldrich (1989) established that compliance with governmental regulation weighs heavily on smaller organizations and the burden of compliance have also been found to affect failure rates. Lussier (1999:32) reviewed the works of Hodgetts & Kuratko, 1998 to reaffirm his point of view on size and governmental regulations. Additionally, poor and inadequate record keeping can contribute to failure.

3.8.2. Is the growth decision process gender-specific?

Both men and women business owners were motivated to grow primarily by respect reflected in public recognition, employment of others and employee morale, and by the availability of support from spousal partners and bankers. However, an important gender difference is that women business owners were not as optimistic as men regarding their ability to marshal the capital and administrative support resources requisite for growth. Findings on some studies suggest that growth motives may not be internally driven as suggested by traditional motivation theory.

Moreover, successful growth within the small business is dependent upon the capacity of the owner to manage expansion within the limits of their resources. Studies by Gibb and Davies (1992) report that the “ distinctive competencies “ or potential for development found within the firm include the financial, physical and human resources as well as the experience, leadership, ideas and control base of the entrepreneur. To further improve growth and

³² Liability of newness is the propensity of new organizations to have higher failure rates. Some of the problems are lack of networks, difficulties running the organizations, increased risk of mortality as well as lack of experience to operate a business (Dyke, Fisher, & Reuber, 1992)..

³³ Liability of smallness assumes the organization size influences organizational mortality. E.g. of such studies are lack of financial and human resources, which can create a distinct disadvantage.

succeed, firms need to develop additional resources, To date, many small firms appear to lack many of the resources needed to compete in the future, such as lack of technical and managerial skill, inadequate organizational adaptability and ability to acquire or use technology.

3.8.3. Differences on the levels of success attained by firms across gender and size

The levels of success women businesses have reached across times is a matter of discrepancy by most researchers, While some studies attest to the success women have gained on many fields, in business they appear not to have reached the same levels of men owned businesses. The reasons appear to be quite diverse. Most statistics and reports show that women-owned entrepreneurial ventures are of increasing importance to the U.S. economy and world economy. Evidence is their rate of business creation, their percent share of small firms, and their revenues and employees, their experience and business skills (Cooper, et al., 1994). The table below summarizes empirical studies contributing to explain the difference on firm performance across gender.

Table .3.3 . Studies Analyzing Business Performance Across Gender

Autor	Year	Findings
Cuba, DeCenzo & Anish	1983	Lower performance for women-owned businesses than for those that are owned by men
Hisrich & Brush	1984	Lower performance for women-owned businesses than for those which are owned by men
Hisrich & Brush	1987	Lower performance for women-owned businesses than for those that are owned by men.
Loscocco, Robinson, Hall & Allen,	1991	Lower performance for women-owned businesses than for those that are owned by men.
Seakarun & Leong	1992	Women's primary responsibilities (childcare and domestic tasks) create a barrier to venture creation and performance on businesses.
Johnson & Powell	1994	Males and females are equally successful in making decisions under risk. Lower preference for risk among women versus men.

Source: Researcher own elaboration based on literature reviewed.

A study by Chaganti and Parasuraman (1999) brought to light, in most instances women and men were more alike than different on the strategies used in management practice and performance. Yet their study showed that there are similarities on the ROA and

employment growth criteria. Other studies cited other factors as evidence of the cause for differences; of which the most relevant are: women-owned businesses are relatively small and suffer from liability of newness and smallness (Sing and Lumsden, 1990) women-owned businesses tend to gravitate toward sectors that traditionally produce lower earnings (Aldrich and Auster, 1986, Loscocco et al. 1991). Hisrich and Brush (1984) indicate that female-controlled firms are more likely to be in the retail and service sectors, than other sectors.

While studying performance of women-owned businesses at the corporate front this researcher found, in an analysis of Fortune 500 companies done by Catalyst (2000), that the companies with the highest percentage of female Directors also reported the highest revenue. From the companies reporting revenue in the top quintile also reported that only 11.3% of their directors were women (Sewell, 2000). In addition, companies whose revenue placed them in the bottom quintile reported that 8.2% of their directors were women. Alternatively, other studies argue that given rationality, all things being equal, women are equal to men and suggests that differences in performance emerging would be due to external structural factors, Hisrich, Brush, Good and DeSouza, (1997).

3.8.4. Studies on the general problems and challenges faced by female-owned firms.

Studies on the subject reported that women face a multifaceted environment, and that balancing work and family are found to be the biggest obstacles for managing or starting businesses. Yet, often women cite economic reasons for not starting a business. A study by Buttner (1993) that was later revised by Buttner and Moore (1997) found that women see business as a life choice, not a career. Many other studies cite that female-owned businesses are more similar than different to men across psychological and demographic dimensions such as independence, achievement and job satisfaction, as motivations to start a business (Chaganti, 1986).

Additionally, studies on women in business and gender studies argue that the social Structures (Calás & Smircich, 1989) including work, family, social life limit the experiences and socialization of women (Carter et al., 1995). This view argues that socialization experiences of men and women result in different self-perception, motivations, and belief structures. Some writers argue that women are at a disadvantage because they face education, family and workplace barriers (Aldrich, 1989). Orser (1997) found that “ there is a pervasive belief that small firms female owners face disproportionately greater difficulty obtaining bank credit than do men. In addition, the same study showed that those women business owners, fearing discriminatory treatment, might avoid banks as a source of capital. Other studies specify quite different dimensions in communication styles. In the work reported by the Laurentian (1998) data center, women, even in business decisions, tend to be more collectivist whilst men lean toward individualism. This explains how women prefer partnerships and informal business support network more than men do, including family.

Earlier studies by Hannan and Freeman (1977) argue that the problem in knowing the importance of women in SMEs creation and survival is, because earlier studies focused mostly on organizational performance, were at the macro level and used the population ecology approach. These theorists focused mostly on survival and neglected differences in the success levels attained. Currently, the focus has shifted significantly. The resource-based view has become the best and most significant manner to analyze performance in general and the entrepreneurial development in particular. The focus now is the firm resources and internal development.

3.8.5.. Studies on Decision-Making, and on Practices that Hinder Success Across Gender

Results from these studies posit that earnings and the meaning of success differ somewhat across gender. Fasci and Valdez (1998) found, in a study of 276 male versus 328

females, that female-owned business gross revenues were approximately half of that of men. A reason might be that women tended to gravitate toward more traditional service sectors than toward higher earnings businesses like manufacturing and construction sectors, though there are changes foreseen in that front (see Table 3.4. below for studies on the difference in decision-making and practices which might hinder success across gender).

Table 3.4. Decision-Making And Practices that Hinder Success Across Gender

Author	Year	Findings
Vesper	1980	Successful enterprises are more often started by males who are able to Manage risk, are achievement-oriented, and engage in systematic planning
Cuba.	1983	Women rely less on systematic practices in their strategic decision-making.
Hudgens & Fatkin	1985	Males and females are equally successful in making decisions under risk
Hisrich & Brush	1987	Women place greater emphasis on non-financial and personal goals.
Hisrich & Brush	1987	Women rely less on systematic practices in their strategic decision-making.
Bruce & Dwyer	1988	Women contribute larger proportions of their personal income to household expenditures than males and thus are able to retain less profit after investment.
Birley	1989	Entrepreneurs possess more similarities than differences in decision-related personality traits.
Tinker & Downing	1990	Females have different business strategies and objectives than men. Women are household-motivated, men are often business-motivated
Kalleberg & Leicht	1991	Female businesses were just as successful as male businesses.
Kallerberg & Leicht K.	1991	Women are more likely to see quality as their competitive edge & possess less confidence in their ability to make decisions as well as in the outcome of these decisions.
Hollander	1992	Equality in roles of leadership.
Allen & Truman	1993	Female enterprises are frequently hindered by lack of business information, advice, and access to networks and business support systems.
OECD	1993	In developed countries, enterprises are more female oriented; social networks and support systems are well-developed, including having access to entrepreneurial training and information resources.
Johnson & Storey	1994	Females enterprises were smaller and more likely to employ female workers.
Johnson & Powel	1994	Women are: less cautious, less confident, less aggressive, easier to persuade, have inferior leadership, and problem solving abilities.
Eagly, Karau & Makhajani	1995	Equality in roles of leadership.

Source: Researcher 's own elaboration based on literature reviewed.

Currently, as many more women are being educated in nontraditional fields and are excelling different businesses might surge. This represents a potentiality for business formation. Likewise, women are currently entering fields like agriculture, construction, manufacturing and other non-traditional fields (Certo & Dalton, 1999) that are more in demand. In this instance, the National Partnership for Women & Families (2000) Work and

Family report and cite a rise in specific numbers of non-traditional jobs like auto-mechanics, plumbers, electricians, etc. There's also a tremendous increase in the number of female lawyers, economists, judges, and managers and this groups are mostly self employed, in addition to economically sound. Kallerberg and Leicht, 1991, among others, found that industry choice influence business size and smallness of female-owned business.

Studies on the type of business chosen, size, age of business, and the possibility of raising capital. Brush (1992) found that women tend to have slower growing business than men, and lower annual revenues compared to men (Chaganti and Parasuramn, 1996 and Fabowale et al. 1995). Other studies reported that women tend to have less management experience (Rosa, 1994, Chaganti & Parasuraman, 1996). Catley and Hamilton (1998) found that female owned businesses tend to raise less external capital and are three times more likely to run a business operated from their home. Hisrich and Brush et al (1997) reaffirmed findings of a previous study that reported that women businesses, on the average are younger, and there is a positive relationship between age and the size of the firm. The same study reported, that women operate their business on a part-time basis to comply with family responsibilities. It appears, and many argue, that the situation is about the same today.

Further studies on gender differences in size of business found that women-owned businesses are smaller and they face more liability of smallness of newness (Singh and Lumsden, 1990). These liabilities extend to capital access, attaining economies of scale, growing in size, meeting regulations and even competing for qualified labor with larger organizations (Aldrich and Auster, 1986). In a competitive market like the one business currently face, this becomes a disadvantage. Larger and innovative firms tend to pay more and provide more benefits; therefore they can attract and retain better human capital. See Table 3 for a summary of studies on the subject.

Regarding the age of the business, and performance, earlier studies by Fishbein-Azjen (1975) acknowledged that not only business owners make their decisions as to whether (or not) they want their firms to grow, but also the study reveals that the trade-off differs according to the gender of the owner. To them, these differences imply the need for ancillary services (government agencies, consultants, trainers, etc.) to adopt training methods to reflect gender-based differences in the trade-off process. Other studies found that differences on business growth, performance, and banking practices from women in business have been attributed to different factors. Chell and Baines (1998) reporting on their own studies and reviewing those by Orser (1997) reported that, previous research suggests that fewer women than men may decide to pursue the growth of their businesses. Their study suggests that evidence is mixed specifying that intention. In this scenario, the growth decision is the best predictor of behavior. To these authors, intentions stem from tradeoffs inherent in any decisions, factors that in this case include financial and non-financial considerations, and the feasibility of the outcome. Feminist and management literature suggest that inherent barriers may partially limit the growth decision of women-owned businesses. Table 3.5 that follows exemplifies studies on decision-making, including those interrelated to lack of access to the resources necessary to attain growth.

Table 3.5 Gender Differences in Management Styles and Decision-making

Autor	Year	Findings
Powell	1990	No significant gender differences in Management Decision-Making styles.
Sexton & Bowman-Upton	1990	Entrepreneurs possess more similarities than differences in decision-related personality traits.
Brush	1992	Women rely less on systematic practices in their strategic decision-making
Powell & Ansic	1997	Gender differences exist in business strategic behavior
Singh, Reynolds & Muhammad	1996	Female businesses were concentrated in low-income informal sectors, where prospects of growth were limited. Employment growth rates of female enterprises were significantly lower than those of male enterprises.
Chaganti & Parasuraman	1996	Mixed conclusions.
Sonfield & Lussieer	1997	Male and female showed no differences in the situational (innovation/risk) natures of their ventures and in the strategies they choose to employ. Men were more satisfied with business performance than women.
Hisrich	1997	Women entrepreneurs reported high personal Satisfaction and similar sales levels to their male counterparts.
Hisrich, Reuber & yke	1997	Women rated economic necessity and recognition as more important motivations than men to see service and quality as their competitive edge.
Powell & Ansic	1997	Mixed conclusions.
Hamilton	2002	No significant differences by the entrepreneur's gender in venture innovation/risk situation, in Strategies employed.

Source: own elaboration based on literature reviewed.

There are other studies attesting to commonalities and differences across gender; some of these studies did find differences between the genders, others did not. Researchers like Aldrich, Brickman, and Reese (1997) point out that differences across gender exist in some dimensions. Rosa et al. (1994) found that systemic gender differences in owners' previous business-related experience might result in differences in both vision and ability. Brush (1992), found significant differences in reasons for start-up/acquisition, timing, educational background, work experience, and business skills, and in managerial styles, business goals, business characteristics and growth rates. Sexton et al., (1990) found that women scored lower on risk taking and endurance or energy level.

Meanwhile, other studies found similar psychological profiles and traits across gender and differences in patterns of social networking (Sexton and Bowman-Upton, 1990, in Aldrich et al., (1997). Orser (1997) found that both, opportunities and barriers may be

gender-specific and that women tend to choose businesses that do not grow with the same speed as those chosen by men (for example, women-owned firms are concentrated in the service and retail sectors, sectors which tend to be less able to attract outside investment than other sectors). The same study showed that socialization differences across genders might partially determine owners' growth expectations.

Contrasting empirical evidence on performance across gender shows opposite views; though the subject of difference on performance across gender is often a matter of discrepancy by most researchers. While some studies attest to the success women have gained on many fields, in business they appear not to have reached the same levels of men owned businesses. The reasons for this outcome appear to be quite diverse. Most statistics and reports show that women-owned entrepreneurial ventures are of increasing importance to the U.S. economy and world economy. Evidence is their rate of business creation, their percent share of small firms, their revenues, number of employees and their experience and business skills (Cooper, 1994). Table 3.6 presents other relevant and selected empirical research on women owned businesses.

Table 3.6. Empirical Studies

Author	Year	Sample Size	Location of Study	Results
Fabowale	(1991)	2,700 small business owners.	(1/3 women), United States	Found no evidence of gender bias in any respect regarding loans accessibility.
Kallerberg & Leicht	(1991)	411 across sector	Canada	No differences for found on the survival process on one versus another nor that women business were less successful
Chell and Baines	(1998)	104 micro enterprises	United Kingdom	No significant differences between the performance of male versus female
Hisrich	(1997)	3,000 male and female entrepreneurs	United Kingdom	Found demographics and goals in business ownership between the genders were similar
Chell and Baines	(1998)	104 micro businesses in the service sector	United Kingdom	No significant difference between the performances of male versus female owners

Source: own elaboration based on literature reviewed

Findings from a research by Fabowale (1991) based on a 1990 survey to 2,700 small business owners of CFIB members, found no evidence of gender bias in any respect regarding loans accessibility, except in one dimension related to collateral requirements, which was found to differ by gender. Also, a study by Kallerberg and Leicht (1991) on 411 companies across sector, and examining the hypothesis on how the survival and success of small businesses headed by men and women are related to industry differences, and attributes of owners, reported that no differences were found on the survival process of one versus another nor that women owned businesses were less successful.

Meanwhile results from the study by Loscocco et al., 1991 and the former author reported that few differences were found in personality traits of men and women entrepreneurs. This is a far contrast to results reported by Hisrich & Brush (1984) who found that significant differences were observed in the personal backgrounds and in the firm attributes of men and women-owned businesses. The same study found management patterns of women owned businesses were found to be different. Brush (1992) found that women used systematic management practices less than men. Further studies of women entrepreneurs found women to be innovators, including those being in areas not traditionally occupied by women (Chell and Baines, 1998).

Additionally, studies by the Canadian Federation of Independent Business (1998) found no statistically significant differences across gender in credit access like interest rates charged on term loans, interest rates on lines of credit, co-signature requirements, rates of turndowns on applications for new term loans, new lines of credit, or increases in current operating loans given to women. The Chell and Baines (1998) study in the UK, with a sample of 104 micro businesses in the service sector, found no significant difference between the performances of male versus female entrepreneurs. Hisrich (1997) in a study based on 3,000

male and female entrepreneurs, found that demographics and goals in business ownership between the genders were similar. He also found that on business skills like marketing and idea generation, men rated higher while women did so in dealing with people. Chaganti and Parasuraman (1999) argue that few studies have examined the direct and indirect linkage of gender to differences in business performance. Hamilton (2001) in a survey method examined differences across gender and areas of strength and the size reached; found that motivation and areas of strength were similar. However, regarding the size of businesses, in terms of financial measures, female businesses were smaller.

Motivated by this evidence this researcher became interested not only on analyzing what determined success, but also on studying the existence of competitive advantages, and on learning if differences in performance existed across gender and sector. As early as 1999, the aforementioned researcher propositioned the desire to study these linkages based on perception and observation of the existence of this differences. Specifically, the proposition sought to find out whilst business owner's gender influences performance directly or, if it is the type of goals, strategies, managerial practices, and choice adopted by the business owner that determines firm performance.

3.9. Entrepreneurial orientation, marketing activities, and environmental influences affecting firm strategy

The role of marketing

It is argued that the organizational structure (Covin and Slevin, 1988, 1999) and the marketing posture of small firms influences performance. The resource-based view posits that the essence of strategy is or should be defined by the firm's unique resources and capabilities (Rumelt, 1984). Also that the value of strategy resides in the firm ability to sustain a profitable market position which itself is based on the rent generating capacity of the firm's underlying resources. As such, in a competitive world of business, for a firm to be

successful requires either that the firm's product is distinct, differentiated or the firm has a competitive cost position over its rivals (Conner, 1991). Nowadays those positions are achieved in the marketplace and only when perceived by the firm's clients. Thus, the role of marketing in projecting these perception and image has become crucial and value rendering. Research studies also suggest that both an entrepreneurial and strong marketing orientation influence performance.

Other studies (Carson and Cromie,1989) acknowledge the effects of management styles and the culture of the small firm has on the character and nature of marketing planning activities. It is a known fact that marketing is an essential aspect of business success nowadays, whichever way it is measured. Even though limitations and constraints on small business planning and marketing is acknowledged for many SMEs, some authors (Siu and Kirby, 1996) recommend and presume that marketing is universally applicable. Moreover, the same authors point out that the relationship between marketing and corporate or small business plans has not been identified. Environmental effects on the competitive position attained by successful firms.

Field studies support the resource-based theory departure that an enterprise 's firm-specific resources serve as the driving force for its diversification strategy. Nowadays, according to Kirby and Siu (1998) report, marketing has become a major sought after capability for any firm as studies by. Mahoney and Pandian (1992: 367), found strong empirical evidence to reject the hypothesis that the direction of diversification occurs at random. Instead they found that a firm's competence and intangible assets in advertising and R & D explain the direction of diversification strategy. Teece, Pisano et al. (1997) found that competitive forces are a function of the effectiveness with which firms keep rivals off-balance through strategic investing, pricing, and strategic signaling and information control.

3.9.1. The role of the environment and industry structure

Environmental research and constant analysis of the environment is necessary if businesses opt for strategies geared to increase the competitiveness indispensable for the survival of firms. Some authors articulate that the true origin of competitive advantage is due to the proximity of the local environment in which the firm is based, and that competitive advantage resides as much in the environment as on how it shapes the way the firm's activities are configured, and its resources are assembled. Hamel & Prahalad (1994) assert that while management of change is a central concern of executives in most successful organizations, changes in the business environment continually erode the effectiveness of a firm's strategy and organization. Kesler, Koldstadt, and Clarke (1993) and Prahalad and Hamel (1990:79-91) state "most small business are not successful because their owners bypass incorporating changes, new trends, and environmental analysis into their business cycle."

Under the Resource-based view perspective, the environment provides few restrictions on the growth of the firm. Increasing costs for resources and declining revenues for individual products may limit the expansion for those particular resources and products, but the firm is able to use other resources and it can create new markets. The environment does not limit the firm to a fixed set of growth opportunities. Rather, growth opportunities always exist to the extent that the firm chooses the right ones.

3.9.2. The environment of the industry structure and its effect on performance

The industry environment in which a firm is does define the constraints. Facing it as well as its resource requirements is difficult in some industries, where perfect competition

almost exists, in this instance, firms have very few options and face many constraints. However, in other less competitive industries member firms face fewer constraints and a greater range of options. If industry affiliation does have a significant impact on firms' strategic options, when economic factors are less favorable, a difference between firms in competitive and less competitive industries. This evidence makes it even more forceful the usage of resources, attaining competitive advantages and often survival within the constraints and barriers posited by the sector. Indeed, firms in a less competitive industry will have a better chance to survive than in a very competitive industry.

This theory claims that when the economic environment changes from favorable to unfavorable conditions, many businesses, especially small organizations, are doomed to fail. In the 1930's, a group of economists developed an approach for understanding the relationship between a firm's industrial environment, its behavior, and its performance (Mason, 1939 & Bain, 1968). The theoretical framework that developed out of this effort became known as the structure-conduct-performance model (Scherer, 1980). The mentioned framework indicates that the structure of an industry defines the range of options and constraints facing a firm. In some industries, where perfect competition almost exists, firms have very few options and face many constraints. However, in other less competitive industries member firms face fewer constraints and a greater range of options. Industry affiliation does have a significant impact on firms.

Survival factors for firms vary depending on how the environment is. When economic factors are less favorable a difference between firms in competitive and less competitive industries should be evident. Firms in a less competitive industry will have a better chance to survive than in a very competitive industry. However, many researchers pointed out that during the recession in the early 90s, while many large corporations were

forced to downsize, the number of small businesses was actually increasing and small businesses provided the badly needed jobs for Americans. This brings the researcher to argue that economy may not be the critical factor for the creation of entrepreneurs.

SMEs across sectors often do not possess the financial or human capability to seize opportunities, to utilize resources to its maximum, nor have the time disposition to visualize what should be the best avenue to succeed. This is contradictory, because often firms are at an advantageous position and do not optimize on it. It might be partial blindness, lack of vision or choice. Maybe the previous two, since any firm will definitely choose higher return option if it is foreseen as such.

3.9.3. The role of planning in a firm success

Taken altogether, planning is terribly important for firms and should be an integral part of the management process since its benefits can outweigh the costs. Ignoring planning is to relegate a source of competitive advantage to disadvantage. Reading multiple sources in popular business magazines (Business Week, Fortune, Entrepreneur) seems to back the idea that organizations that plan effectively achieve higher performance than those that do not. Thus, the model designed intends not only to explain the relationships between dependent and independent variables, but also to suggest specific questions that can be addressed in the research. The explanations about what each variable represents and how it relates to the Resource Based View appear in the paragraphs ahead.

Evidence is ambiguous and often contradictory regarding planning. Many authors believe that business mortality would be greatly reduced if more planning is done at pre-startup as well as when the business progresses. However, evidence also suggests that the value of planning is context-dependent (Castrogiovanni, 1996). Mintzberg, (1985, 1979) expresses that planning is appropriate for machine organizations and it should be minimal

within entrepreneurial organizations. Though many disagree with Mintzberg's conclusions, students of entrepreneurship have argued that planning process and their effect differ between small and large businesses (Robinson, 1982; Gilmore, 1971). Other studies suggest that formal planning should take place prior to a new business start-up (Hisrich & Peters, 1989 in Hisrich et al., 1997; Sexton & Bowman-Upton, 1991). However, ample notable cases exist where new businesses became successful without much start-up planning. Apple Computer, Federal Express, Microsoft, Walmart are just a few examples.

A survey of 220 "INC. 500" businesses (i.e., relatively small, but among the fastest growing businesses nationwide) revealed that (51%) did not have formal plans when they started (Castrogiovanni (1996: 802). Also the article reports that majority of firms (70%) that generated plans did so to obtain external financing. The same research also showed that those businesses without formal plans tended to be more profitable. Thus, most would agree, that planning can be beneficial, but some suggest that benefits may differ across contexts. This focusing on where, why, and how benefits are derived from planning within what Mintzberg (1989:257) refers to this as the "entrepreneurial context," in particular, planning for small business startups. Literature pinpoints to the benefits of planning. Drucker (1973:122) emphasizes, and that " planning what is our business, planning what it will be, and planning what should it be have to be integrated...everything that is 'planned' becomes immediate work and commitment". However, some authors caution that planning can be overdone, incorrectly done, and ineffective (Mintzberg 1994) while other authors cite firms that have survived avoiding planning as Baeckler 1996 found (Perry, 2001:201).

Studies completed by Singh and Lumsden (1990:168) convey the idea that new businesses must establish external legitimacy with customers and sources of capital, as well as with networks. However, the same study reports that older organizations have established

their legitimacy, especially with customers. According to a study by Cooper (1993) in a previous study (Cooper, Dunkelberg & Woo, 1989) demographic factors like age and educational background are closely associated with organizational success. Likewise, other studies reveal that smaller firms often suffer from lack of resources, especially financial, to be able to formally plan.

Moreover, other studies into the strategic planning process of small businesses seem to pinpoint that most planning deal with generalities. While studies by Braecker and Pearson) as early as (1985) identified eight formal planning components including establishing objectives, environmental and SWOT analysis, studies by Robinson and Pierce (1983) measured whether firms had written plans for at least three years and if such plans included delineated strategies, objectives and resource needs. More recently, Naffziger and Kuratko (1991) studied more intensively into the actual plans to determine the amount of time management spent on development of their plans, their areas, kind of activities, among others. Naffziger and Mueller (1999: 10), departing and duplicating a previous research by Robinson and Pearce (1984), studied 71 small firms with less than 500 employees in Midwest US and found that regarding planning, their study demonstrate that planning is prevalent among firms. Those results support Kuratko (1991) studies which affirmed that planning in today's firms is not as anemic as Sexton and Van Auken 1982) affirmed. It does exist. Regarding the content strategies developed, only half of the firms reported to have made formal mission statements and used those only moderately to drive strategic plans.

3.10. Objectives and hypothesis:

The overall objectives for this thesis cover the different angles upon which this thesis is based, specifically these aim at determining which are the competitive advantages and distinctive competencies exhibited by Puerto Rican firms and their role as determinants of

success across gender and size. In addition, the goals aim to design a guideline/model, which SMEs and policy makers could use to induce success and deter failure. Lastly to contribute to the scientific debate in Entrepreneurship research, specifically regarding what determines and sustains competitive advantages. For a detail of the general aim and specific objectives see the appropriate section on chapter 1.

Research hypothesis

The hypothesis formulated here not only are contained within the conceptual model designed for this thesis, but also, these are delineated to explain the model and to answer the questions posited for this research. The hypothesis formulated here are the null hypothesis against which alternative hypothesis advanced under the resource-based perspective will be tested.

- H1: The traits of the CEO/entrepreneur (i.e., level of education, his or her business related experience) the profile or traits of the firm (age, time of founding, initial investment, size and industry) and the strategy used do not affect significantly the level of success attained by the firm.
- H2: The competitive advantages and core competencies existent in successful firms in PR as well as their performance are not significantly different across sectors, (i.e., type of industry), gender or size.
- H3: Firms success performance and/or failure do not depend on the competitive advantages attained by the firm or on how these are sustained. This sustainability does not surge from the indirect effects provided by the available resources and capabilities developed by the firms within the environment and industry in which the firm operates.
- H4: A firm's strategy based in terms of the level of planning, competence in advertising, R&D, and human resources as well as the development of intangible assets like reputation, does not affect positively the firm's direction and performance.
- H5: Firms that define their strategy based on the theory of resources and capabilities will obtain better and more positive results than those that do not use this focus.
- H6: The factors that determine firm's success do not vary significantly across gender nor are there barriers inherent to gender; the variance found across firms is only due to the size and growth patterns of firms.

- H7: Business owner's gender is not correlated to the size and sector in which the firm is nor to the firm performance or survival rate.
- H8: Businesses owned and operated by women do not appear as likely to survive and succeed than those operated by men. Differences are due to external circumstance and not to personal attributes, like previous experience, product market characteristics, & size of the firm, which automatically determines the level of success attained.
- H9: The factors necessary for firms to succeed do not vary significantly across successful and non-successful firms in terms of resources and core competencies.
- H10: The difference between successful and non-successful firms does not reside on the exploitation of resources, innovativeness in products and services, and pro-activeness but on the role and attitude of management, the level of sales reached and size attained.
- H11: The problems inherent to firms in Puerto Rico are not due to inherent barriers like the island smallness nor do they differ significantly from those possessed by firms elsewhere.

Acceptance levels: assumptions will be accepted or rejected on a question- by-question basis. Hypothesis will be accepted or rejected if firms prove to be successful in at least 75% of their responses, on all questions ranking of the interviewees with a level of confidence of 5%. As such, firms will be considered highly successful if they rate 10% or above, very successful if they rate 80% or above. Firm' s ratings between 75%-61% will be considered not doing well. Since the objectives appear to be to stringent, it is necessary to point out that in most cases a firm with even a 63 % performance, under this model, is doing good. If any of the ratings changes clarifications on the reasons for this occurrences will be provided.

3.11. Synthesis.

The principal aim of this research and the hypothesis underlying these standpoints Is to determine the competitive advantages and distinctive competencies that determine success for local firms were presented and defended on the chapters already described. In

addition, this chapter describes the theoretical framework selected for this thesis as well as the theoretical model designed to illustrate it. Furthermore, the selection of this theoretical standpoint is contrasted with other theoretical points of view; a revision of the evolution of the resource-based view versus other points of view is also considered. A solid argument on how the standpoint chosen (RBV) fares against other relevant theories, was also presented for the solid purpose of clarifying this researchers position. Likewise, this chapter describes and discusses this research main and specific objectives, research questions, and research hypothesis. Thus, this chapter becomes key for establishing the upcoming structure for this thesis. Similarly, the next chapter, chapter IV will delve more profoundly on the methodology used to accomplish research goals.

Additionally, a discussion and defense of why this theoretical standpoint differs in essence to the traditional resource-based view perspective is included. For this thesis, the main focus rests on the central figure role in determining performance, the manager; also this departure is examined extensively. Still, this chapter clarifies the position chosen by this researcher and how, further along, the aims of this dissertation will be tested. What is more, relevance of this subject is presented to address how significant the topic chosen is within the context of the island of Puerto Rico, specifically within the island's delineated long term aim; seeking competitiveness in highly changeable times. Justification for this study is presented with some of its various reasons: a) no studies of this nature appear to exist studying differences across SMEs, b) no studies differentiating the role and performance of women versus men definitely exist, c) nor are there any research that seeks to establish criteria that could be use as success stimulators and demise deterrent. Thus, within the island context, statistics of varied nature do exist as well as articles on men and women in business do abound. Yet, no study has been published on the subject presented here nor following the perspective taken here or the theoretical standpoint chosen.

From both a learning and an entrepreneurial standpoint, added relevance is given to this study based on statistics and reports which emphasize the increasing role of women in business without the due recognition and support. A further justification is the incidence of failures in certain specific sectors, and the incursion of multinational firms with the perceived barriers to succeed that this competition in costs and economies of scale have delved on island's firms. Thus, the importance of this study is further justified and increased. Moreover, research on entrepreneurship has underscored the importance of understanding, as best as possible, the conditions that promote business survival and success, specifically including the role of gender.

Likewise, the selection of the resource-based view of the firm above other theories and its focus on the entrepreneur is argued and defended. This selection was done after examining how, on many respects; one theory complements the other while seeking differences across points of view. In addition to the purported conflicting views between the two related perspectives, IO theory and the RBV, some authors like Spanos and Lioukas (2001) and Fahy (2001) see certain relatedness. The resource-based view and the competitive strategy complement each other in explaining firm's performance. This has been confirmed by research done by Mahoney and Pandian (1992), Conner (1991), Peteraf (1993), and Amit and Schoemaker (1993). As early as 1984, Wernerfelt had seen both approaches as two sides of the same coin. Likewise, Barney and Griffin (1992) argued that examining strategy implementation, the skills required to implement it, as well as the resources and capabilities needed to implement it, cannot be understood independent of the strategy content and the competitive environment within which the firm operates. Precisely, this is this researcher's position regarding this thesis. There is no doubt that a need exists to vehemently analyze firm's success within the context of the environment it operates and analyzing the content of the decisions as well as the decision makers' role and traits.

Additionally, the emphasis the resource-based view perspective and its focus on resources make the firm in the basic unit of analysis. The firm becomes almost an entity with the capability to decide its future while being conditioned by its history and past decisions, as this writer believes and was asserted by Fernandez and Suarez (1996). The theoretical standpoint adopted emphasizes the firm, the existence and selection of specific resources, as well as the efforts made in developing and combining resources to achieve competitive advantages as the avenue necessary to acquire success. As Conner (1991) argued, a theory of the firm must explain why firms exist and what determines their size and scope. Specifically this point of view coincides with Lippman and Rumelt (1982) earlier remarks that, a theory must explain both the origins of and inter-firm differences as well as the mechanisms that impede their elimination through competition and entry (Fahy, 2000). As such, a main strength of this researcher's theoretical departure selection rests precisely in seeking direct answers (based on formulated questions which appear in the research instrument) as to what determines success for local firms. This view has also been similarly studied by Foss (1996). To obtain responses to these queries, direct questions to the effect were delineated; specifically geared as to which are the resources firms prioritize to achieve success, which are the factors firm's considered their success is due to, and to which are their areas of strengths and weaknesses due.

Examining different points of view, while remaining with the chosen view, added additional insight into a more balanced view onto the determinants and sources of competitive advantages, also, it balanced the selection of resources that determine firms' performance focusing on the firm and the entrepreneur's traits and role as unit of analysis. It is the hope of this researcher that the methodology chosen, and the theoretical standpoint selected will provide further insight into understanding the reasons and aims formulated. Lastly, attention is given to different aspects: to the characteristics of key resources that can

increase firm's value, to the non-substitutability and non duplicability of resources, as well as the resource heterogeneity needed to succeed. This emphasis was used with the purpose of explaining not only what determines success for local firms, but also for explaining if the traits and success determinant for our SMEs differ to firms elsewhere.

CHAPTER 4

RESEARCH METHODOLOGY

4.0 Introduction

The methodology for this dissertation was designed to encompass the research approach necessary to obtain the information required for achieving the research aims. It includes both qualitative and quantitative research regarding small and midsize businesses established on the island for at least three years. The design is centered on explaining the methodology, and techniques delineated to probe the objectives and hypothesis. Mainly the methodology involved three phases: qualitative phase, quantitative phase, and the third phase, which corresponds to the design of the model of success. The retail, service, small custom manufacturing, and wholesaling sectors are the domain for the information gathered. The firm and the decision maker or CEO is the unit of analysis for all phases. Moreover, this chapter also presents and describes the procedure, methodology, and the techniques used to gather, process, analyze, and test the hypothesis formulated.

To avoid repetitive explanations, it is important to notice that the theoretical framework underlying all research phases is the resource-based view of the firm. In addition, there are other elements common to the overall design that will be addressed as

commonality, and this are: the secondary sources of information, the acceptance and/or rejection process, the focus on the firm, and the role of the manager as decision maker. Thus, two descriptive research models/figures are included in this chapter. Model 4.1 illustrates how the overall research process was implemented from the beginning until the end, while model 4.2 comprehends the empirical research process. The three phases underlying this thesis implementation are described below:

First phase: qualitative research involved three matched pairs of successful and non-successful cases implemented in the construction industry. Information was gathered via in-depth interviews to entrepreneur's/owners of SMEs as well as face-to-face direct interviews to experts, focusing on both successful and non-successful firms. Information was supplemented by literary review and reports published in the media relating to the sector's history and performance. The methodology utilized to analyze this phase followed Yin's and Maxwell's case analysis guidelines, Critical Incident Technique, and SWIFT methods for processing qualitative research.

Second phase: quantitative research includes results from the mailed questionnaires sent to a selected sample of SMEs across sector and gender. The study was implemented island-wide and included successful and non-successful firms. In addition, this phase involved direct and phone interviews to experts in diverse fields. Results from these responses were processed according to the methodology deemed appropriate for each data. The procedures used are described in the appropriate section. After processing the data, results were analyzed following standard statistical procedures appropriate for nonparametric studies. This section also includes additional direct interviews administered to SMEs in the island; the same sample extraction methodology used in the survey was utilized for this

portion. The information resulting from these interviews was processed and presented in a descriptive manner in percentages, while general open questions were treated in a qualitative fashion. The latest questionnaires were implemented and used only for support and validation purposes. In both phases, the qualitative and quantitative, once the information gathered was processed; these were transformed into meaningful statistics using different programs, including EXCELL and MINITAB.

The third phase involved the process of designing the model of success. The model designed was obtained from the survey mailed and used in the second stage or quantitative phase. The information obtained was processed, and transformed via statistical methods designed for such purposes, including SPSS, SAS, Principal Component Analysis (Princomp), and Prinqual were the principal methods used to analyze this data. Further along, results from all phases were compared to empirical studies done elsewhere. Furthermore, findings on all phases and literature were contrasted in order to state conclusions and propose recommendations.

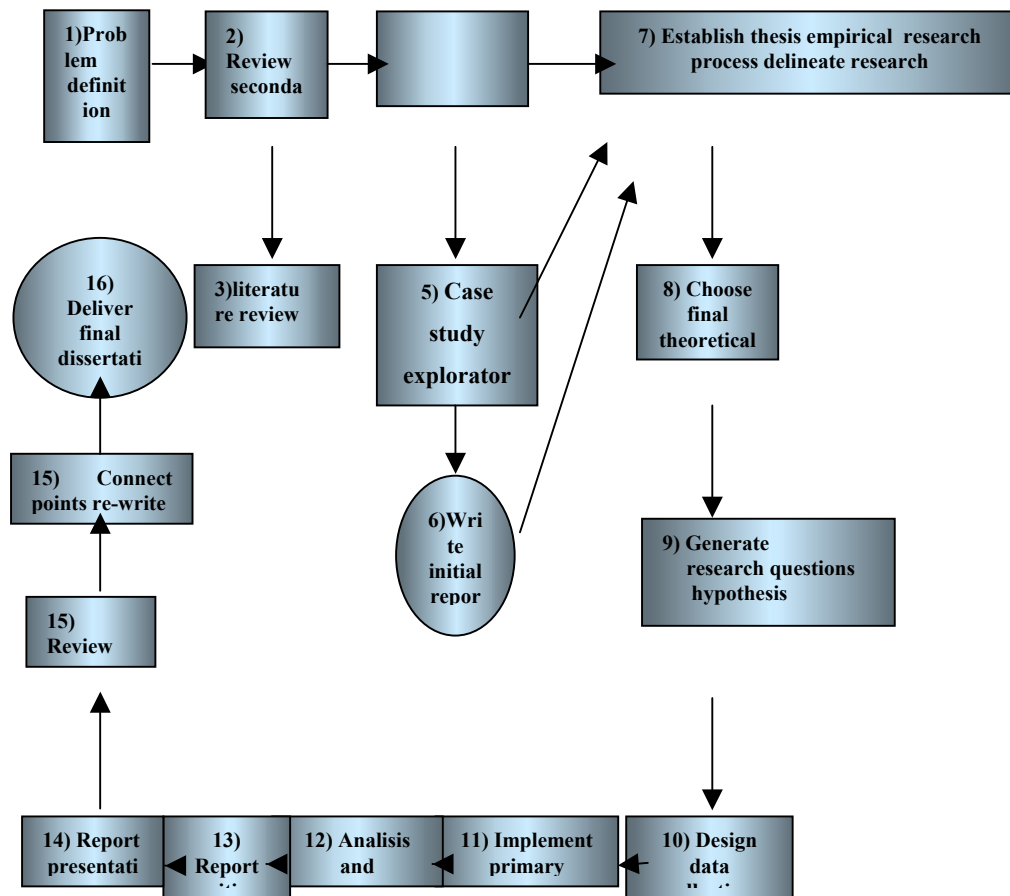
4.1. The overall research process

This process is delineated under the premises of the Resource-based view. Collectively, this research should provide the foundation for understanding if differences in performance of businesses are based on the strategy used, the resources possessed, the managerial capabilities developed, the industry in which the firm performs, and/or the entrepreneur' background. Furthermore, the research methodologies as well as the underlying aspects needed to achieve the research goals are presented in its various phases. The study is mostly causal (used to show how one variable causes or determines the value of other variables) in nature, and *ex-post facto* (seeks to explained events that occurred).

Nevertheless, the first section or qualitative phase was of an exploratory nature (seeks insight into the general nature of a problem, the possible decision alternatives or relevant variables that should be considered). Using a combination of both exploratory and descriptive analysis, for both qualitative and quantitative sources, allowed this researcher to acquire diverse perspectives and match findings to research purpose, from different angles. The design used aided in attaining the delineated main purpose of this study design, which sought to determine if the competitive advantages, and distinctive competences exhibited by local firms determine success for SMEs across sector, gender, and size.

This chapter also deals with several other relevant aspects. On the one side, the general methodology used is presented, as well as the scope of the dissertation. Next, the various phases onto which the dissertation is divided are also addressed. The procedures, techniques, sources, instrument of analysis, as well as the sample selection, the methodology for sample extraction, and the process of survey administration are also included. Likewise, the objectives of the dissertation are introduced as well as the hypothesis and assumptions, with their corresponding measures, are also described on this section. Thus, the overall research process implemented for this thesis from the initial phases till the end is exemplified by figure/model 4.1.

FIGURE 4.1. General research methodology model for the complete thesis



4.2. Research questions, general and specific objectives

To remind the reader, the approach underlying this thesis is designed to explore and examine, via qualitative and quantitative research methods, the competitive advantages and distinctive competencies that determine success in firms established in Puerto Rico for at least three years, across gender, and size. To establish the departure point, the questions posited and general objectives are presented here not just as a reminder but also for clarifying the researcher position and methodology selected. The questions posited include several broad questions: which are the competitive advantages that determine success for local firms? Which is the relative impact of industry versus firm-specific effects on performance? What is the role of capabilities? Which are the firm's internal determinants on performance? What is

the managerial value in the decision-making process, and ultimately on success?

In lieu of the amount of failures in our market and the high levels of competition, we need to ask ourselves, why so many large firms keep entering the market? Why so many new businesses are successful while traditional firms are stagnant or failing? Why do these “megastores” and multinationals keep growing in size and sales, and our local firms do not? Why new firms emerging daily capture the market fancy with diverse service offering? Seeking to answer the questions, the objectives delineated for this dissertation are: First, determine which are the competitive advantages and distinctive competencies exhibited by Puerto Rican firms and their role as determinants of success across gender and size. Second, to analyze which are the success determinants for local firms. Third, to examine what differentiates successful firms from non-successful firms in terms of resources and core competencies. Fourth, and due to the increasing incursion of women into the labor force and business sphere, to investigate if the problems SMEs have in facing the challenges and risks necessary to become successful is gendered and affect their size. Fifth, add to the research effort in studying SMEs while providing empirical evidence that could assist in creating a guideline/model that SMEs and policy makers could use to induce success and deter failure. Sixth, to contribute to the scientific debate in Entrepreneurship research, specifically regarding what determines and sustains competitive advantages.

Specifically, the research design also comprises the factors that determine *success* differ across sectors (i.e., retailing, service and agriculture, and wholesaling) to those factors posited by firms elsewhere. Precisely, this research also deems imperative to answer several questions and probe the hypothesis formulated. Moreover, since the problems exhibited by SMEs on the island are said to posit significant differences in performance across sector, gender, and size. And, since the reasons for such occurrence are as of now unknown, it is this

researcher's belief that a need exist not only to understand the reasons behind this occurrence. In addition, the methodology chosen aims to rationalize why differences, if any, occur in lieu of statistics pertaining to growth in demand for products and services, as exemplified by the entrance of large multinationals. In order to investigate the assumptions delineated, the main aim of this research is to probe if the assumptions posited are correct. If the opposite occurs, then plausible explanations shall be presented or at least a reasonable solution will be attempted.

The specific objectives for this thesis are:

The specific objectives are demarcated to assist more specifically in proving the hypothesis and goals formulated and include qualitative and quantitative research methods. These objectives are presented again with the sole purpose of reminding readers the basis for this dissertation; these appear below:

A). Objectives designed to determine which are the competitive advantages and competencies existent and attained by local firms.

- 1) Identify which are the competitive advantages and competencies existent on Puerto Rican firms.
- 2) Determine which are the areas of strength and weaknesses that give way to and determine success for local firms.
- 3) Analyze if local firms have been able to sustain their competitive advantages and competencies across times
- 4) Evaluate if the strategies used by firms are formulated based on their resources and capabilities or are based on external influences within the environment in which the firms evolve.
- 5) Analyze what differentiates successful firms from non-successful firms in terms of resources and core competencies

B) Evaluate and determine what influences firm performance or success, is it either by the strategy used or by management experience, owner intentions and decisions, or the sector,

gender and/or size.

- 1) Identify which are the contents of the strategy conducive to success (business plans or planning, areas of strength and weaknesses, external counseling, and goals setting) used by firms and how they affect performance, and if they compare to literature and firms elsewhere.
- 2) Evaluate which are factor (s) determinant for the level of success attained by firms?
Do the strategies used, the manager or entrepreneur's role and/or traits, or the traits of the firm determine these?
- 3) Investigate if the problems SMEs have in facing the challenges and risks necessary to become successful is gendered and affect firm's size
- 4) Evaluate if in terms of the strategies and goals defined, firms performance differ across gender, size or sector.
- 5) Examine and evaluate based on financial performance indicators if the success level attained differ across sectors or gender.
- 6) Evaluate, based on the problems posited, resources possessed, and competencies obtained at some point, what differentiates successful and non-successful firms.

C) Analyze the components of strategies that determine success, i.e. planning tools, types of analysis, marketing practices used and incorporated into the firms that according to the new trend in competitiveness can lead to success.

- 1) Identify which planning and analytic tools and marketing practices used by firms across sectors, and the impact these have on success.
- 2) Evaluate the focus, and utilization of resources geared to increase firm positioning and service improvement across sectors, and if they relate to firms' success.
- 3) Relate the strategies and goals defined to the level of success reached basing this evaluation in terms of the model of success designed.
- 4) Relate and differentiate if the resources, problems posited and success determinants vary while seeking to determine if environmental variables affect the performance or success levels attained by local firms.

D) Conclude and derive implications regarding if the CA and competencies that determine success for firms on the island relate to those found elsewhere, and establish which learning process can be obtained from this research.

E) Evaluate if in lieu of the findings and analysis of the empirical section, a model of Success could be designed and if this model could be used as guideline for success and demise deterrent.

F) Derive conclusions, suggest recommendations, and seek implications that could be used to probe the formulated hypothesis and assist the sector.

4.3 Common elements to all phases in this dissertation:

The different aspects common to all the phases are described as follows:

Unit of analysis: The unit of analysis is the firm. Focus will be at the firm or enterprise level. At island level only firms established in the island for at least the last three years will be analyzed. For clarification purposes, the firm is understood as " more than an administrative unit; it is also a collection of resources the disposal of which between different uses and over time is determined by administrative decision" (Penrose (1959: 24). This thesis adopts three main categories of resources: tangible, intangible and capabilities is used³⁴. Often, though, the term resources are delimited to those attributes that enhance the firm's efficiency and effectiveness. Regardless, in order for a firm to gain high levels of performance and sustained competitive advantage, firm's need to possess resources that are rare, difficult to create, substitute or imitate and that ultimately could be sources of competitive advantages.

Acceptance levels: Assumptions and hypothesis for the thesis results will be accepted or rejected on a question- by- question basis. Hypothesis acceptance or rejection is based on a confidence level of 95% with a margin of error of 0.05% of acceptance. Nonetheless, since this statistical probe was designed for the exact sciences, it is important to clarify that within

³⁴ Other authors use the sub-classification of six major categories of resources: financial resources, technological resources, physical resources, human resources, reputation and organizational resources.

the Social Sciences, under which domain business is, a 10% margin of error is perfectly acceptable. Sometimes it goes as far as 60% margin of confidence with a 10% error. Why? Each firm is unique, it is difficult to standardize behavior, and, as such, the researcher delineates the scope of acceptance by his/her experiences, as well as the literature departure point. In the specific case of the model of success designed, acceptance will be based on if at least 75% of the responses fall within range on all questions ranking of the interviewees with a level of confidence of 5%. As such, firms will be considered highly successful if they rate 75% or above, very successful if they rate 65%-55%. Firm's ratings between 55%-40% will be considered successful. Lower rating than 40% will be analyzed as not doing well. Since the rating appear to be to stringent, it is necessary to point out that in most cases a firm with even a 60 % performance, under this model, is doing quite good.

Secondary data: research was collected from different sources: external sources to the firm such as library sources, Internet and articles published in local media. Articles from journals, and from government, from textbooks, and other public sources were also used. However, the major portion of the information gathered derives from literature review from databases while internal sources data was generated from the firm, including financial information, written reports and advertisements. Accessing internal information from private and public sources was considered of utmost relevance. Thus, reviews of published cases, analysis of techniques and referrals to successful and non-successful firms, and studies on gender and culture were also gathered. Further along, the information obtained was reviewed, organized, compared and analyzed accordingly. Additionally, data used for this thesis derived from other external sources from journals from America, and Europe, from articles published in common media circles, and from government statistics. Overall, more

than 200 articles were read, and a large numbers of books were reviewed. Research focus is centered on the decision maker or the firm’s CEO/entrepreneur.

4.4. Empirical research model

To generate the information necessary to implement research goals, an empirical research model was designed and implemented. The model describes the process used to test the theoretical framework and is based on several steps: first, a series of questions were developed, next, objectives were delineated, and hypotheses were formulated. The sequence is illustrated in the following figure/model/figure 4.2, which, at the same time, exemplifies the empirical research process.

FIGURE 4.2. Empirical research process

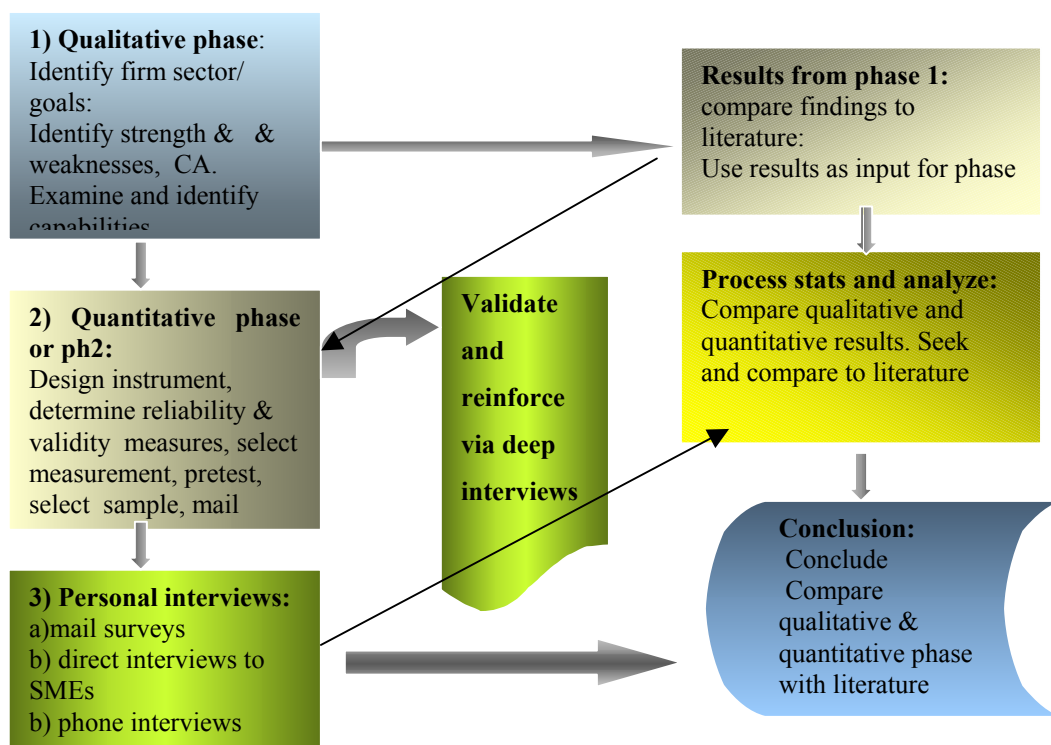


Figure 4.1. Comprehensive empirical methodology. Researcher’s elaboration

The questions formulated served to statistically test the hypothesis, and, potentially, to replicate findings. After reaching this phase, the model was staged to include not only the different sections described, but also serve to find out if firm performance is gendered.

4.5. Research hypothesis & operationalization of variables

The hypothesis formulated and presented here are contained within the conceptual model designed for this thesis, and are also delineated so as to explain the model and to answer the questions posited for this research. Hypotheses are formulated according to the concepts each one will measure. Following are the hypothesis with the corresponding operationalizations.

4.5.1.Hypothesis and how they are operationalized:

Table 4.1.Research hypothesis and operationalization

H1	The traits of the CEO/entrepreneur (i.e., level of education, his or her business related experience) Profile or traits of the firm (age, time of founding, initial investment, size and industry), & the strategy used do not affect significantly the level of success attained by the firm	Traits of CEO=the level of education, origin, experience previous to founding business & business related experience (Loscocco et el, 1998) Trait of the firms= age of founding, type of business, initial investment, size, legal organization, original financing.
H2	The competitive advantages and core competencies existent in successful firms in PR, as well as their performance are not significantly different across sectors, (i.e., type of industry), gender or size. (Cochran, 1981), gender (Orser, et al, 1992) or size (Orser, Chell, and Baines, 1998).	Efficient usage of resources, skills developed, networks, reputation, branding, etc.
H3	Firms success performance and/or failure do not depend on the competitive advantages attained by the firm or on how these are sustained. This sustainability does not surge from the indirect effects provided by the available resources and capabilities developed by the firms within the environment and industry in which the firm operates.	Financial & market performance = Financial include ROI, ROA, NI, reaching planned sales. Market, include building special relationships with customers & suppliers, market knowledge, and control over distribution.
H4	A firm's strategy based in terms of the level of planning, competence in advertising, R&D, and human resources as well as the development of intangible assets like reputation, does not affect positively the firm's direction and performance.	Include business plans and planning (Castrogiovanni, 1996), goals set, strategies designed at founding time, reaching & updating goals, R & D.
H5	Firms that define their strategy based on the theory of resources and capabilities will obtain better and	Strategy content and internal efficiencies attained are source

	more positive results than those that do not use this focus.	of CA. Barney 2001, Amit and Schoemaker, 1993, found that using this standpoint has shown a positive correlation to success
H6	The factors that determine firm's success do not vary significantly across gender nor are there barriers inherent to gender; the variance found across firms is only due to the size and growth patterns of firms.	The number of employees and business units measures size. Growth depends on intentions or clear pursuit. Success relates to market, financial, mixed measures & self-reported measures. Performance is based on increased marketing focus, internal analysis, & analysis of the environment. Other performance measures are: innovation, being proactive, as well as R&D implemented.
H7	Business owner's gender is not correlated to the size and sector in which the firm is or to the firm's performance or survival rate.	Measures: number of years in industry before founding & business related experience.
H8	Businesses owned and operated by women do not appear as likely to survive and succeed than those operated by men. Differences are due to external circumstance and not to personal attributes, like previous experience, product market characteristics, & size of the firm, which automatically determines the level of success attained	Survival is seen as how long firms remain in business, and cover costs of operations. Also, experience previous and in business related activity (Dyke, Fisher & Reuber, 1992; Lussier 2001).
H9	The factors necessary for firms to succeed do not vary significantly across successful and non-successful firms in terms of resources and core competencies.	Comparison of expressed determinants of success across firms. Problems to succeed and barriers will be used here.
H10	The difference between successful and non-successful firms does not reside on the exploitation of resources, innovativeness in products and services, and pro-activeness but on the role and attitude of management, the level of sales reached and size attained	Purposeful questions will be asked to answer this hypothesis.
H11	The problems inherent to firms in Puerto Rico are not due to inherent barriers like the island smallness nor do they differ significantly from those possessed by firms elsewhere.	Comparison of results to literature & empirical findings elsewhere, especially countries with similarities.

4.5.2. General measures for control

To obtain replies that could be used to test the hypothesis formulated a series of Questions were formulated and included in the instrument designed to achieve the research

aim. CEO's and managers were asked specific questions about their firm's competitive advantages and areas of strengths and /or weaknesses. For a clear understanding of the questions see the questionnaire included in appendix 1. Specifically, definitions in this thesis are based on the variables operationalized below and how they tie to literature:

Types of resources to be considered: Independent variables

Physical resources: infrastructure, machines, equipment for work or production.

Human resources: selection/ training, quality of employees, education, experience, and business skills (Cooper et al. 1994).

Marketing skills: market share, idea generation, dealing with people, goal goals setting, recognized leadership.

Financial resources: sales, ROI, ROA, break-even in (n) years taken to reach a profit.

Technological/resources: technology, innovative processes, information, databases, and computer skills (some of the resources described here are taken from a study by Hisrich and Brush (1982, 1985).

Competitive advantage: These are defined in terms of the usage of resources and capabilities³⁵. Definitions, including earlier ones, suggest a strong association between competitive advantage and organizational effectiveness (South, 1981, Day and Wensley, 1988; Grant, 1990; Barney, 1990), and on identifying, developing, and taking advantage of enclaves in which a tangible and sustained advantage can be achieved. Includes skills, resources, lower costs, and value adding activities. Service effectiveness, and where these advantages reside- self reported measures based on a list deriving from literature. Also these include networks, general strategies (financial, market, production, human resources) and the firm structure.

Financial measures: Independent variables. Include: net cash flow/ income, growth rate per year either in employees growth or income, gross profit, total sales growth, sales, return on sales & ROA.

³⁵ Capabilities refer to a firm's skill at effectively coordinating its resources and how to deploy and use them advantageously. Resources (include: capital equipment, skills of employees, reputation, brand names (barney, 1991) and are the source of the firm's capabilities as cited in McGee & Love, 1999.

Overall firm success: Dependent variable. Self-reported. Involves two dimensions: the external aspect or market performance (Venkatraman and Ramanujam, 1987 and Siu and Kirby, 1998) and internal aspects like profitability that brings to term firm's success in the market. Mostly market performance has been positively and significantly affecting profitability in most empirical studies (Rumelt and Wensley, 1981). Profitability is measured in terms of (ROI, ROE, profit margin, and reaching planned sales). To comparing the firm position today to those in existence when the firm started needs to include measures of absolute sales across three years and changes in these measures, according to a report by Brush (1992) referring to a previous study by her and VanderWerf (1991) performance have multiple measures. Some of the factors targeted in the questionnaire to determine what has rendered success for the firm in this study rare: achieving goals, in reputation (managerial, prestige, compliance with customer relations, leadership in industry and years to break-even).

Moreover, several questions were delineated to relate firm's financial position, for this a modified Likert scale of 4 points was used, to performance as well as success measures, among others. These questions include finding the levels competitiveness (Q 35), owner manager's opinions on the importance of resources, including human resources as well as organizational resources (Cooper and Gimeno-Gascon, 1991).

Organizational capabilities: Dependent variables. Denote Teece et al's (1997) and include knowledge and skills of employees as well as efficiency in organizational structure, strategic planning procedures and ability to attract creative personnel. Between this capabilities are organizational, marketing, and technical, all of which are considered in literature as sources of sustained competitive advantage. As Spanos and Lioukas (2001:914) asserted, these variables will be source depending on the interconnectedness on their mutual dependence. These factors were analyzed deeply by Amit and Schoemaker (1993) and by Dierickx and Cool in 1989.

Market capabilities or measures: Independent variable. Market positioning measures

include building special relationships with customers and suppliers, market knowledge, control over distribution, etc. For this study several questions were drafted to determine market positioning, among these are Lado, Boyd and Wright (1992) is one of the authors using this measurement. Several question were delineated to cover this aspects including question (Q) 35, Q58, relation with competition, networks Q62, Q64, and select aspects form Q 7, and Q69-82

Sector and gender: This is a control variables and includes retail, service, including agriculture, wholesale, and small manufacturing.

Organizational size: Was measured in the number of employees and in the number of business units established.

Strategy: Is represented by the existence of business plans, goals set, strategies designed at Founding time as well as in reaching and updating goals. Investment in R & D, and if there is any expressed innovativeness. Also, the concept covers self-expressed perception if the strategy is differentiated or not or if it is focused on prices, or differentiated markets, (costs, etc.). Other aspects on which the strategy could rest are analyzed: traits of the entrepreneur, traits of the firm. Miles and Snow as early as (1978) consistently found that organizations with clearly defined strategies perform better than those firms whose strategies are characterized by lack of clarity and emphasis.

Traits of the entrepreneur: The level of education, origin, experience previous to founding business (H5), & business related experience. Success is also based on the experience of CEO's managers (Fishbein and Ajzen, 1981; Lussier, 1996 & 2001; Dyke et al, 1992) on his or her demographics (Cooper, Dunkelberg and Woo, 1989).

Trait of the firms or profile: Age of founding, type of business, initial investment, and type of legal organization, size in units of business or selling locations,, and in number of employees. If the firm has changed location, and how the business was financed is an aspect of the profile. Research on success relates it to trade offs and intentions based on the profile of owners (Orser, Hogarthe-Scott and Wright, 1999).

Resource –based view: Measured on how the firm uses resources to achieve competitive Advantages, and also, on how firms use internal analysis.

4.6. Research methodology and design- across phases

The research design and methodology utilized for this thesis presented involves many interrelated decisions. Most significantly the choice of the research approach (causal and descriptive), and to determine the ways by which information will be gathered and aims achieved. The research tactics are also part of the design (which include measures used, questionnaire constructed, and design, sampling plan and expected results). Finally, data collection and analytic tools are the last component of the research design. Moreover, among other relevant elements reflected on are: which questions are delineated, how research objectives and hypothesis are formulated, and under which premises, as well as the tactics delineated to achieve aims. The fit necessary to gain insight into complexity of the population to be studied as well as the assessment of the research process in terms of costs, timing and reality is also encompassed onto the design.

The research approach for this thesis includes the various methods used for data collection, the types of methodologies used, the research design and elements contained in each phase. Likewise, each phase describes how the resulting analysis will be utilized to reach the expected results formulated for this dissertation.

4.6.1. Qualitative phase

Data for this research phase and study was compiled from 6 live cases gathered from deep interviews with CEO's, managers, accountants, lawyers, and personnel from the three successful and three non-successful firms in the construction industry. This phase, which is the initial input for this study, served to explore and understand, to some extent, which variables determined success for local firms. Moreover, this portion helped to explore and delve on the subject and as input for the questionnaire to be designed for the quantitative

section. This case study uses triangulation techniques to identify the competitive advantages existent in SMEs on the island and how these advantages identified determine success. The methodology utilized is based on in-depth personal interviews, on observation of businesses premises and the utilization of data files from the analyzed firms. To increase objectivity, interviews are implemented not only with responses from the owners /CEOs, but also from data incoming from secondary archival information from employees and accountants. Different sources were used to increase validity and reliability. Moreover, this case study uses also published reports, and advertisements. Data's retrieved was corroborated with interviews outside the firm inner circle. Thus, this method of research was also selected because of its historical and contextual nature. Nevertheless, many researchers believe that the method not being quantitative in nature does not possess the confidentiality many sectors ascribe to quantitative methods. Seeking to resolve this issue, this chapter not only analyzes the results from this case study, but also discusses why the qualitative system has been used as input and exploratory research for the second phase of the study rather than any other methodology.

4.6.1.1. Why qualitative research was used on this phase. A comparison of quantitative versus qualitative method.

Qualitative research deals and focuses on understanding the behavior of phenomena of interest; it is generally characterized by small non-projectable samples that can be used for analytical standpoint. Some argue that it is often considered soft research with little value in the business setting yet, other sectors have reported opposite opinions. In general, the method is an integral part of the many tools used to answer managerial questions (Davis 2000:300). The differences between qualitative and quantitative research depend on the researcher goals and standpoint. Often both methods are used as complementary, as is the

case in the study whereas the two data collection methodologies are used. This research also utilizes as is typical in qualitative research, passive data collection (PDC), and observation, in depth interviews and face-to-face interviews (lawyers and bankers) other qualitative research techniques.

Moreover, methods combination is used often in conjunction with the formation and interpretation of results for quantitative studies. This writer finds no major differences between methods; whichever there might be exist with the substance and approach to the problem at hand. Thus, purely quantitative studies are used to measure specific characteristics through structured data collection procedures, often with large samples (of more than 100 observations), so that the results can be projected to the entire population (assuming random samples). Conversely, qualitative studies are usually in-depth investigations of an unstructured nature, using a very limited sample (8 to 12 individuals are usually sought in focus groups or three or four cases).

Qualitative analysis under no circumstance attempts to represent the entire population, on the contrary, the goal is to understand the nature of the phenomenon in a holistic sense, rather than to numerically measure and analyze a predetermined set of variables (Davis 2000). As a technique, qualitative research requires a high degree of analytic skills and should be viewed not as a competitor but as complementary to quantitative research. Moreover, the nature of qualitative research makes it ideal in exploratory stages of the research process because of the generally low degree of understanding of the problem situation (Rialp, 1998). Qualitative research has also been used successfully in all stages of the problem understanding process. This is precisely how the method was used in this research.

Furthermore, this research phase also served as input for the questionnaire design and was used in the final analysis assist in understanding the triggering factors that ultimately determine success in SMEs, by focusing on the sector whereas most failures are reported the construction industry. Furthermore, the technique has been ascribed to some countries and disciplines more than others. Per example, the Japanese rely strongly on the method (Hines 2000). In the marketing field, this methodology is used profusely to analyze new product introduction or consumers preferences, the development of new products and advertisements, to understand the nuances of consumer service in health care settings among others. Applications are limitless. Likewise, Yin (1998) proposed a series of requirements for a case study to be valid which are illustrated on table 4.2.

Table 4.2. Requirements Yin (1998) sees as basic in a well-delineated case study research.

Test	Tactic	Phase of the research where to apply it fundamentally
Construct validity	Use multiple sources of information Establish a chain of evidence Revise the report elaborated by key researcher in the case	Data gathering Composition
Internal validity	Pattern matching Creation of an explanation Analysis of temporary series Logical models	Data analysis
External validity	Use contradictory theories in each case Apply replant theory in the study of multiple cases	Research design
Reliability	Carry out a study protocol Develop a base of facts (backup)	Data gathering

Source: Yin (1998:242) translated and reconstructed from Rialp Criado (1998).

In addition, to give validity to the study, the researcher needs to scrutinize for lack of representation of the phenomena, which might impede the results from being generalized. Lack of research rigor in the gathering, constructing, and analysis of findings mostly introduced by the researcher is another variant that has to be prevented.

4.6.1.2 Research methodology used for this case study

The research process suggested and the system used in this study follows Yin (1998) typology using holistic multiple case study. This means that one unit of analysis is focused, the construction industry; the data for each case is individually gathered following the same methodology.

Table 4.3. Processes that Yin (1998) sees as basic in a well-delineated case study research

Phase	Activities	Motive(s)
Initiate research	Define the research question. Possible constructions or concepts at priori. No theory and hypothesis as a start.	Guide efforts. Give a better support to previous measurement. Keep theoretical flexibility
Select cases	Determine the population. Theoretical and Random Sample.	Limit unusual variations and reinforce external validity. Guide efforts toward those cases, which extended the theory.
Design protocols and research instruments	Various methods for the facts collection. Combine both qualitative and quantitative data Meet various researchers.	Fundamental theory is reinforced. Search for synergy of evidence. Encourage divergent perspectives.
Field Work	Overlap the findings with a first analysis of data. Use of flexible methods for information gathering	Speed up the analysis and adjust the information gathering. Allow the researchers to take advantage of the emergent aspects of each case.
Data analysis	Analyze each case information and search for trends between the cases through divergent techniques.	Allow the sequence and generation of a preliminary theory. Strength the researchers to go far their previous impressions and to visualize the evidence from multiple views.
Formulate hypothesis	Tabulate the available evidence for each concept. Apply replant theory (logically) between the cases. Search for evidence to identify causes after relations detected	Reinforce your definition, validity, and measurement. Confirm, extend, and/or refine the theory Give internal validity
Literature review	Contrast of divergent literature. Comparison of similar or favorable literature.	Give internal validity, raise the theoretical level, and adjust concept definition. Reinforce the generalization, improve the conceptual definitions, and increase the theoretical level.
Reach conclusions Finalize the study	Theoretical saturation if possible.	Finish the process when the marginal improvement is minimum.

Source: Translated from Eisenhardt (1989: 533) adaptation and extracted from Rialp (1998).

Each case according to Yin's is interpreted alone and when each is finished, following the pre-designed guideline, findings are summarized and compared so as to draw conclusions from which theories can be derived. The process used to analyzed and as

expressed above, following Yin's (1998) involves: a) deciding the objectives and questions to research, b) deciding on the theoretical model to be used, c) design the research methodology and financing of the research, d) select and identify the unit of analysis, e) initiate data gathering, f) analyze data and reach conclusions.

Evidently Yin's (1998) opinions invalidate the former complaints. To Yin, generalizing is not only statistical, it is an analytical generalization, and the case is used to contrast or make inferences on similar findings as Rialp, (1998) also found out. Maxwell (1998) coincides with Yin (1998) in asserting that what the case method aims at is to develop a theory which could be transferred to other cases rather than generalize. Table 4.3 below illustrates the different requirements necessary for the case research followed step by step in this study process of analysis.

Specifically, the present study, being a multiple case analysis and embedded in the same industry, seeks to generalize if the competitive advantages and success determinants in the construction industry is similar to what occurs across industries. Analyzing this concept is based on premises that foresee successful growth within any business as the product of a complex mix of variables that are both internal and external to the firm. Such variables are frequently related to "enterprise resources" which include all assets, skills capabilities, organizational processes, attributes, information or knowledge under the enterprise's control, which can be used to develop competitive positional strategies (Barney, 1991). In addition, those resources that do offer competitive advantage are referred to as distinctive competencies. Therefore, to analyze if these competencies exist on firms and not knowing much on the subject, the case method became the most suitable alternative.

Yin's (1998) suggests that for the case method to be solid analytically, the research method should: a) Clearly state the research objectives of the study. b) Ensure the qualitative research technique used is the most appropriate given the objectives of the study. c) Determine if quantitative research is also being undertaken, ensures the two types of studies are complementary. Moreover, lastly, making sure the investigator follows the process. Accordingly, for the research six cases are analyzed, three drive from successful firms and three from non-successful firms. All cases were obtained following Yin's (1998) design. The industry selected was done after reading government reports stating which sector had the highest percentage of failures in the island, and after realizing which firms, within geographical boundaries, could represent the dynamics of the Western side of the island and the industry. Originally, five cases for each sector were targeted, but the other firms declined to participate. As such, not being able to match non-successful firms, the successful number was reduced, resulting in the final three matched pairs analyzed.

Thus, in each case, the in-depth interviews required a series of repetitive visits to the business premises and interviewing not only the CEO's /owner but also other firm's representative, including the accountants. In some occasions partners were interviews as well as knowledgeable persons from the community, per example bankers. The study is longitudinal in nature. Moreover, data gathered was enriched with observation of internal nature of the firm's general business premises.

The Case selection phase involved, also, the selection, preparation, collection, transcription and analysis of three successful and non-successful cases in the construction industry of Puerto Rico, specifically Lumber and Hardware stores. Selected findings from this research that served as input for the questionnaire used in phase II. The information obtained was processed, interpreted and analyzed to answer the research objectives.

Additionally, some interviews with government representatives and policy makers are also included and supplemented the study. Selection and interviews of firms in the study, observation of business premises, of employees and of customer's behavior, as well as internal primary data was gathered from all business sectors studied. Data was mostly self-reported.

Data gathering instrument. In the case of the three successful and three non-successful firms selected for this research, information was gathered via a guideline questionnaire specifically designed for this study. The questionnaire designed was based on questions pertaining literature on the subject and utilizing the resource-based view of the firm as theoretical standpoint. Before administering the questions guidelines, a selected number of questionnaires were pre-testing; later on this were discarded. After, corrections for content and length was done, the instrument was adjusted and used. Questions designed were implemented face-to-face and with direct questioning. The dependent variable, success, was compared against factors linked to performance. Selection and interviews of firms in the study, observation of business premises, of employees and of customer's behavior, as well as internal primary data was gathered from all business sectors studied are incorporated into the research findings. Thus, the self-reported data results were validated with outside sources accessed so as to improve and provide an unbiased opinion on the selected businesses.

4.6.1.3. Processing and analysis of the data

After completing the data for each case information was transcribed and processed following the methodology prescribed. Analysis was done seeking commonalities and differences across firms. Once results were analyzed, findings were enriched with supplementary personal interviews from industry representatives and form information from

large industry service providers and users as well as from bankers. Results were backed up by literature review and by published statistics. The critical incident technique method was utilized to summarize data findings in terms of commonalities and differences. Results are presented in narrative format and via tables. Additionally, some interviews with government representatives and policy makers are also included in the study.

4.6.2. Expert opinion.

As was previously explained and also illustrated in the model, expert opinion was sought to validate findings from the interviews implemented face to face. Mostly this was used in order to validate the low response rate for both sectors. But mostly, to add to the non-successful interviews responses. In addition, these interviews served to explain why firms that had been successful once had reached a total market and financial decay stage. Since the firms evaluated, from a financial standpoint were bankrupt, the researcher did not feel an opinion could be expressed without further verifying findings and data results. As such, bankers who are knowledgeable of the market and projects were consulted. These opinions somewhat validated the information provided by the CEOs, their officers and other sectors. Therefore, the opinions rendered, the conclusions and generalizations presented pertaining the case analysis not only followed suggestion from experts like Maxwell, Yin, and Einsendhart, but also, were ratified from a practical standpoint.

4.6.3. Quantitative phase

This empirical quantitative phase information derived from the mailed sample from which 48 usable administered questionnaires were obtained in the year 2000. Also, from the 56 direct interviews administered face-to-face to SMEs on the island of Puerto Rico in the year 2001. This primary information was, in addition, supplemented by expert's opinions. The objective continues to be finding and determining the competitive advantages and

competences that determine success for firms established on Puerto Rico, across sector, gender and size. As such, owners of enterprises studied were native firms operating in Puerto Rico for at least three years. The main data for the study extended to not only to owners of different firms across the island but also to lawyers who handle bankruptcy and reorganization cases and organizations leaders. The research design was delineated, initially, using exploratory method. Later on, the study became descriptive and causal.

4.6.3.1.Primary data sources

Primarily, this information emerged from the data gathered via the drafted Questionnaire designed from the qualitative phase. Further along, in both the qualitative and quantitative phases, the instrument was tested twice and redesigned accordingly. As such, the basis for primary information for the overall study came from the various phases: qualitative phase and instrument used, from the quantitative phase and the survey administered, from the interviews with experts that was implemented both in phase 1 and 11 of the study. Additionally, the direct face-to-face interviews administered post surveys (in the quantitative phase) served to ratify findings and primary sources of data.

Expert's opinion as a source of primary data came from interviews to lawyers, bank managers, government loan grantors, and loan valuers were used to validate data and enrich information. Hindering factor in all the study is the fact that even though interviewee's cooperation was attained on face-to-face relationship. In the case of the non-successful firms, owners were and continue to be more reluctant and uncooperative to provide financial information.

4.6.3.2.Sample extraction, size, sampled firms, and sampling methods

The survey sample was extracted selected from official government directories

(business directories from Puerto Rico Industrial Development Corp.) and compared to the directory from the Caribbean Business. Sample extraction lists for the successful firms³⁶ sample were obtained and counterchecked from several directories: the Registry of Service & Small Retail Sector Directory compiled by the Government of Puerto Rico Fomento's office (Official center for statistics regarding firms doing business in Puerto Rico), from the Directorate of Firms established on the Island compiled by PR Telephone Co, and from the Retailers Association mailing lists. Firms listing from the directories mentioned were compared to the private listing published by the Caribbean Business newspaper (one of the two English papers and the only totally business oriented). The non-successful firms lists came from the Bankruptcy Court, a government agency that lists and possesses the official Directory of failed firms. This directory is composed of only firms who have submitted to different bankruptcy proceedings. Extraction will cover the last three years.

For qualifying the non-successful firms, the sample was limited to firms that had submitted bankruptcy procedures and were either in the mailing of the bankruptcy courts records or being supervised by banks. The listing was extended to the population of failed businesses under chapter 7 and 11³⁷. However, the listing for chapter 7 firms, those who filled bankruptcy was fruitless and not reachable. Many of chapter 13 declined to respond to any questionnaire believing it might be the internal revenue, regardless of explanations.

The successful firms sample addresses were checked and traced to firms and based on a

³⁶ Firms in these directories are considered functioning since they complied with taxes, and from a government standpoint have not filed for bankruptcy.

³⁷ This study adopts Dun and Bradstreet's (1993) definitions of failure and discontinuance: business failures for chapter 7 are firms involved in court proceedings or voluntary actions involving losses to creditors whereas chapter 11 are companies that restructure their debt and stay in business, a common event.

directory generated from respondents who filled taxes the last two years (1999 and 1998). As in the case of successful firms, non- successful firms to whom questionnaires were mailed, were also matched by size, age of founding, industry, and location. This procedure was used to ensure not only relevant comparisons, but to also validate the data.

4.6.3.3. Anticipated results and analysis

From the outset, this research was designed to: an at random firms selection, the design would include firms island wide, no sample repetition would be done of either selected respondents or of mailed questionnaire, and also that limited statistical sampling would be used, except for the logical procedures. Beforehand, it was decided to use systematic and stratified sampling techniques. Moreover, the proposal stated that the expected rate of return would be based on neither returned questionnaires, nor that the sample would be increased. It was also declared that responses would be encouraged with an enticement letter. This procedure was implemented. However, while designing the sample selection, and administering the questionnaires, a new reality set on. The initially pre-selected sample was too large and expensive to process; as such, it was reduced.

Sample extraction procedure was initially systematic. Later on, stratification was used a so as to obtain representation from different municipalities and sectors. A weighted average method was used to assign quotas and to make sure the population was well represented in every town and sector. All sample selection on either sector was corroborated in terms of published self-reported data about the number of employees contracted and sales, as per listing, by location, and next, by gender. Additionally, quota system was used to ensure all 23 municipalities were represented. Once the representativeness was ensured, the weights, and approximate quotas were selected. Further on, random extraction was used to select the firms that would participate in the study, without setting aside the correctness of the firm

location or if the business was none-existent, as per directories.

To increase validity, after the interviews were received, phone validations was implemented to a selected at random sample of interviewed respondents. The size of the sample was based on convenience, cost, and timing. This process totally probed right for the successful sector. Because of expected non-response problems from the non-successful sector, snowballing technique was also utilized. The administration of the sample to both sectors, including the non-successful followed an adequate pattern. Most persons interviewed by phone did reply courteously, but neglected to even consider written replies. The only hindrance in the procedure was matching sex and size of firms. This occurred because most firms are either owned or registered by male names.

Response rate and study limitations. Eighty percent (80) of the completed questionnaires were received within the same week of being sent and the others were received three weeks later. Procedure used to obtain responses. To ensure a proper response rate, an introductory section was presented explaining the reason for the study as well as the deadline. No monetary incentives were offered. The deadline as well as the motive for the study was highlighted. However, care was taken to make sure, at all times, that the sample represented the population of women, men, sector, business size (represented by the numbers of employees), and location (geographical area). Thus, no follow up nor additional contact was requested, as was specified in the dissertation proposal. The reason for not repeating the sample was cost, political considerations, environmental constraints, and timing. Furthermore, since the island was getting ready for elections in November 2000 and based on the researcher knowledge of the environment, significant levels of difficulty were expected to obtain respondent participation. Moreover, typically, obtaining responses to studies have

been quite difficult on the island³³. Specifically, requests regarding a firm financial position made obtaining replies even more difficult.

At writing time, the environmental, socioeconomic, and political situation has not improved. The opposite holds true. It is harder to obtain participation in any study both for economic reasons and because of political vendettas. Nowadays, responses would be even harder to obtain since the economic downturn in the United States and the world economy has worsened the scenario of business. The research instrument was mailed mid-September and most results used were obtained by end of October 2000.

4.6.3.4. Field work data collection and response rate.

The project design and raw data collection included a plan for an initial sample of 700 small native businesses across sectors and representing retail, service, construction and manufacturing, was extracted from public and private directories of registered firms. In reality, a total sample of 850 was sent (550 to successful and 300 to non-successful firms). This included the 100-paired sample across sectors was sent later on after the initial mailing. Forty-eight (48) usable questionnaires were received from successful firms, out of which 27.1 were from women-owned businesses. From the non-successful sector ten (10) questionnaires were usable. Questions were validated by phone following Dillman's (1978) guidelines. Moreover, the direct interviews to 56 small businesses were processed using qualitative analysis method designed by Yin (1988). This non-replies system and reticence to reply is characteristic of failing or restructure firms. Arogyaswamy, Barker III, and Yassal-Ardekani (1995) reported the same findings in their turnaround studies. A summary extraction

³³ Several private firms like that of "Asesores, Inc.". Nielsen research has for at least 15 years incorporated prices and incentives in the cost of their private research so as to stimulate responses. Also, quite often the studies need to be done face-to-face to increase replies

summarizing the sample sent, extracted and returned appear below:

TABLE 4.4. Sample size and questionnaires mailed and replies received

Sample extracted & sent	Successful	Non-successful
Population	23,314	
Initial sample	450	200
Added sample	100	100
Total sample sent	550	300
Returned questionnaire	70 answered	198 were sent back unopened. 90 were not returned. Only 12 were returned answered.
Usable questionnaires	48	10

The questionnaires mailed to the non-successful firms included firms that filed chapter 13 and 11, all for the current and previous year. This sample was expanded two weeks later due to the large number of returned non-successful questionnaires from which an ample number were returned for changed address reasons or closures. Also non-responses³⁹ or closed questionnaires with unknown addresses.

4.6.3.5. What should have been the right sample

A sample can be extracted from unknown or known population. In this case the population of SMEs was extracted from a population of firms operating for at least 3 years with between 3-500 employees. Departure was government-based statistics from the “Fomento Comercial” office and County Business Patterns.

Applying the formula⁴⁰:

$n = \frac{p \cdot q}{E^2} \times Z^2 = n$, Level of confidence of 95% and an error of 5%.

Whereas $Z = 1.96$, $e = 0.05$. Estimating a % of responses to be 5%. Then,

$n = \frac{0.5 \times 0.5 \times 1.96}{(0.05)^2} = \frac{.9604}{0.0025} = 384.6 = 385$ Should be the sample size, without knowing what population should have been.

³⁹ An additional justification for broadening the sample was that within a week of mailing, it was very clear that the response rate would be low for the non-successful sector, since a high number of devolutions were received. Also, within the week, 10 completed questionnaires were accounted for, afterwards responses slowed down to a crawl.

⁴⁰ This formula is found in any textbook; this extraction came from Ott (1977).

Then, the error for $n = \frac{PQ \times Z^2}{E^2}$, solving, $E = \sqrt{\frac{PQ \times Z^2}{n}} = \sqrt{\frac{0.5 \times 0.5 \times 1.96}{\sqrt{48}}}$
 Error. $E = \frac{0.5 \times 1.96}{\sqrt{48}} = \frac{.98}{6.928} = 0.14145 = 14\%$ error.

The estimated for population of SMEs 1998 which was 23, 314, then ...

Applying the formula of $n = \frac{385}{1 + \frac{385}{23,314}}$, $n = 378.74$ or **379** or correct sample.

The sample extracted and mailed to SMEs was higher for the successful firms.

Since the responses received were 48 for successful firms the response rate error calculated is $\frac{48}{379} = 12.66\%$ or 12.7%.

For preciseness, since I worked with an estimated population of SMEs, then my margin of error is 14%. In other words, this means that when conclusions are expressed this researcher cannot conclude with absolute certainty, but with a general margin of error of the quoted percentage.

Response rate. Regarding the expected response rate, a priori, the researcher expected a low response rate based on the island tradition. The final responses included 48 usable successful completed questionnaires were received and used. This provided a return rate of more than 10% of the initial 450 sample and 8% of the final sample. Moreover, from the total 300 questionnaires sent to non-successful 198 were returned unopened. Out of the remaining 102 only 10 questionnaires were usable replies, giving thus a more than 10% return rate for both groups. Regarding the expected rate, in order to speed the gathering of data and to positively ensure replies, beginning instructions were specified regarding the objective and deadline for returning the questionnaire to both successful and non-successful firms. Also, a self-addressed envelope was included in the mailing. Respondents were informed that the remittent would pay for mailing. In spite of this, the responses rate was low.

The researcher feelings proved right in spite of the sponsorship letter and stimulus. A

good consolation is that the survey timing was the best by far. Currently, the economic and political situation is unstable, making it even less favorable to obtain high response rate for any study or questionnaire⁴¹. Definitely a 10% response is not considered bad, for island standards. A study done by the Retailer Association with incentives provided a 12% response rate from membership. For the non-successful firms, the response rate is considered satisfactory since most firms who submit to chapter 7 or 11 disappear. Many studies on the island attest to the same results.

4.6.3.6. Measurements and instrument design procedure

Diverse measurements were used to ensure reliability of the data. A number of questions either open or closed were designed to answer questions regarding entrepreneur's background, traits of firms and the strategies used, among others. The sample selected across the island by size, sector and gender was designed to ensure that it represented the population of SMEs. The testing process and the selection of the firms CEO's was used to test the type of questions, deepness, length, and how the instrument could be understood. Length was a problem at first, but after the pre-test several questions were reworded and the questionnaire shortened. A third pre-test was re-done and queries about the response rate were clarified.

The research instrument. The research instrument designed to attain this thesis objectives and hypothesis was the questionnaire. It included open and closed ended questions (dichotomous) as well as rating and graphic scale and category scales, Included were Likert scales, semantic differential, and itemized rating scales type questions, among others. The instrument was pre-tested twice. Most questions were self-designed, but some came from and /or were adapted from previous studies. Some questions derived from guidelines

⁴¹ Currently most firms on the island, as the rest of the world, are mostly worried about the economic recession and finding ways to compete, responses are not a goal

facilitated by Dr. D.A. Kirby and Dr. William Gardner. Questions pertaining marketing were adapted, with due permits procedure, from the author, Dr. D. A. Kirby. Some of the performance indicators used to rate firms follow also a model question designed and used by McMillan, Zemann, and Subbanarasimha⁴² (1984). Some questions guidance was inspired from a questionnaire supplied by Dr. William Gartner⁴³. Questions for the non-successful questionnaires are based on the appendix questions used by Bradley and Rubach (1999:46). In total 202 variables were used for 99 varied questions and sub questions.

Beginning from the early qualitative stage of the study, variables were operationalized so as to delineate the framework for this research. The study used definitions of success established by Lussier and failure and discontinuance definitions are adopted from Dun and Bradstreet's (1993) as published in D & B, 1999, also Lussier (94:25) reported the same findings. The main source of data, the questionnaire, was pre-tested twice and validated. The questionnaire instrument was planned so as to include general demographics, self reported performance measures of success, questions regarding strategy formulation and if the firm formulated plans or not. Questions regarding core competencies, competitive advantages and other questions pertaining the study were also included. Some of the questions were planned to be attitudinal in nature and others descriptive. Different scales were planned and utilized.

4.6.3.7.Validation of the proposed constructs

Survey research is considered by many the most adequate method to implement a

⁴² This performance rating was used initially used by capitalists to evaluate new venture proposals, a system more stringent than those used for firms not evaluated by investment financiers. See McMillan, I.C. Siegel , R. and SubbaNarasimha, *Journal of Business Venturing*, 1 (1),119-128.

⁴³ Special thanks are extended to Dr. William Gartner and Dr. Elizabeth Chell for prompting answering queries I sent via email. Dr. Gartner and Chell not only provided suggestions, but also recommended precise articles to read. Dr. Gartner went even further, he faxed in a question guideline of his authorship. Unfortunately I could not use it, yet reading it inspired me to design questions solely for our island.

study. However, as this researcher explained before, no general agreement exists as to which method is the best. What is relevant, and is the methodology used for this thesis is that the combination of diverse methods increases the reliability of the study. As such, the triangulation method (qualitative, quantitative research, interviews to experts) used for this study by itself is a provision to partially guarantee validity. To add to these controls, the researcher took all precautions possible, within her reach, to ensure no misleading results. Conduction and implementation of the study and control of measurements errors was implemented to prevent research biases. *A priori* controls (in the pretest and sample selection) and *a posteriori* controls (comparing late arrival questionnaire responses to early arrivals) were implemented.

Further, construct validity and content validity was implemented. The questionnaires were mailed to the selected sample. Nevertheless the elicited responses and completed questionnaires used arrived within the one-month period stipulated on the cover letter proved a level of interest by some sectors. Some requested a copy of findings. However, some excellent and completed questionnaires arrived 4 months later. This late arrivals were used to test responses since data was already processed, the received questionnaires were taken as non-response. Nonetheless, the answers to the questionnaires were paired against the previous ones received. Replies matched earlier questionnaire very well. Based on the island responses to previous studies, the response rate obtained is within the accepted boundaries.

4.7 Statistical methods used to process and analyze results.

Data processing and analysis was done using statistical packages SAS, EXCEL, and MINITATAB. Results were processed and displayed in tables and figures. After coding and

processing the data, results were statistically analyzed via multiple methods. General descriptive statistics analysis for non-parametric variables was used including percentages; Spearman correlation coefficients and Kruskal Wallis were used. Tables and graphs were prepared to illustrate findings. Internal and external validity was also used to test reliance of results. Once the information was processed, descriptive statistics, correlation analysis, statistics were matched across gender and sector. Conclusions and guidelines for the sector performance improvement were derived. Results were processed, analyzed, and used to test these dissertation main objectives.

Since the response rate was somewhat low and some replies did not have all the answers, results presented cannot be considered by themselves to be definite and conclusive evidence of the existence of success determinants, based on the replies themselves. Furthermore, results from all sources were compared to major studies, and to literature. Comparing these diverse results not only enriched conclusion but also increased the validity of the results. Conclusions appear to be definite. Results also include interviews to micro and medium sized firms across sectors located in a significant number of municipalities.

4.8. Expert opinion and face- to- face interviews, post survey

To improve results and analysis a second method of data gathering was used. Lawyers and bankers were interviewed, again, in person. This decision was founded on two main reasons: first, to obtain their point of view regarding why local firms fail, and because these persons can supply very reliable and confidential information that for obvious reasons cannot be disclose. Referrals were obtained, a very valid method in statistics when samples are difficult to obtain, as part of the snowball technique to obtain referred respondents. Yet results were not adequate expressions were received but not in writing. The reason being that once firm filled for bankruptcy they remain in legal procedure for n years.

In terms of representatives, expert opinions became a convenience sample and almost the population in the case of the non-successful sector. Once firms file for bankruptcy in the island, they do so via lawyers; if firm founders are in financial crisis they contact their bank. Armed with these references, this researcher was able to contact, via phone, 20 reorganized firms all of which agree to express their point of view. Yet, all firms rejected any written expressions. Their responses are not considered valid for the study quantitative data processing since the written process was not followed. Nevertheless, the opinions of these businesspersons and the expert's opinions are used in the analysis section and utilized as representative of the overall population. Getting and contacting experts is, as such, considered as contacting the population, statistically speaking⁴⁴ Per example, one of the lawyers contacted has been in business for more than 23 years⁴⁵ and handles an average 400 cases per year. Three lawyers were contacted. As such, a highly representative sample of the population was used.

Face-to-face or direct interviews. These interviews were implemented by administering small survey across towns, sectors and gender. These included 56 direct interviews and were administered by students. The objective was to ratify if the results obtained on basic questions included what determines success were about the same in micro enterprises as well as firm with more than 3 employees. The process of extraction and administration was at random.

4.9. Analysis and coherence of the overall process

Though the search for the topic and the delineation of questions and hypothesis

⁴⁴ Consultations with statistician brought to attention the role of experts in studies of this nature in order to increase the study representatives.

followed a lengthy exploratory phase, ultimately this culminated, after implementing the first phase of the study, the qualitative section of this thesis. Hence, after this phase, and utilizing research findings, this researcher proceeded to design the second and most profound section for this dissertation, the quantitative phase. In the meantime, and previous to establishing the research objectives, a thorough search of literature and other secondary data was implemented in order to delineate the methodology for the second phase. Findings and research goals made this researcher determine that most aspects concerning SMEs were of considerable interest, taking into consideration the socioeconomic development on the island as well as the competitive environment into which SMEs evolve.

Ultimately, the research topic was chosen and the research was delineated, a process which was adequately illustrated in the models presented in the chapter. Moreover, once the revision of literature and secondary information available, the methodology for this thesis was designed and within it, was the inclusion of a mail survey. Initial interviews were designed and implemented in an exploratory fashion so as to gather the data needed to address the issues studied. Hence, after finishing these steps, the theoretical framework chosen and descriptive research procedures were reformulated. The chosen framework for this study is the Resource-based view of the firm and the concepts underlying this view. Thus, the design was fit to prove if the competitive advantages, core competencies, and capabilities developed determine success for firms established on the Island of Puerto Rico across sector and gender.

Summarizing. The total usable questionnaires analyzed were: from the mailing of questionnaires, 48 completed were received from successful and 10 non-successful firms. 56 were received from direct interviews. Limitations. Even though this sample does appear not

⁴⁵ This lawyer's experience is well known the Island; he has expressed it and papers of incorporation are

to be representative of the population of failed businesses, their responses were validated by phone and via personal interviews and enhanced. Thus, the margin of error based on a confidence level designed for exact sciences of 95% is only 14%. Comparing responses to each of the question was done for the validation process. Also, business whose responses were received corresponds adequately and represents the main municipality and sectors in the island. In the case of the non-successful groups, though a rather small number of replies were received, having accessed bankers and bankruptcy lawyers equated the sample responses to those of the population studied.

Finally, after processing and analyzing the data as specified previously, conclusions and recommendations were formulated. Conclusions followed the main aim of this research, while recommendations aimed at the learning process from the standpoint of entrepreneurship, from a learning and standpoint and from the point of view of potential assistance for policy implementation. Furthermore, conclusions include limitations and future research.

4.10. Phase III. Design of the prescriptive model: explanatory phase.

This model/guideline has been designed using the findings in phases one and two. The objective of the designed model is to use it as guideline geared to stimulate management of firms incoming to the market so as to adequately prepare them before establishing their business. For firms already established in the market, the model should be used as a failure prevention mechanism. The design bears the same motives and intentions for policy makers, lenders and general interested sectors. The model is intended to also serve for strategic reformulating for small business.

After processing and analyzing surveys responses and interpreting the direct interviews, a model was designed with the intention of explaining which variables determine success for SMEs across sector and gender. This model partly followed the decision process model created by Fishbein-Azjen (1975). Their theoretical model suggests that actions can be predictor of intentions. The model also explains how business owners make decision regarding growth and performance goals. Specifically, this model explains the trade-offs made by business owners to achieve these goals. This model is thought to be closely related to Penrose's (1957) classical explanation of growth; even though other studies measure the performance levels obtained across gender and have found differences in certain dimensions.

4.10.1. Methods of data analysis and calculation of the index

The analysis of data was done both manually and using computer instruments and analysis; the interpretation was done addressing the hypothesis and questions posited in the research. Responses were processed and analyzed using the statistical packages: SPSS, SAS, PRINQUAL, and EXCELL. Results are presented in typical tables, graphs and in report format. As stated in the research proposal, data was analyzed mainly using multivariate and regression techniques. The latest were selected to identify areas of distinctive competencies and to determine how these relate to performance when using one dependent and n independent variables. Typical regression statistics for measures of dispersion and centering data were used as well as descriptive statistics, t-tests, and correlation, and discriminant analysis.

After gathering the questionnaire responses, data was coded and processed through different analytical programs. First, SPSS was used and general frequency tables and

histograms were obtained. Next, data was transferred to SAS program and diverse statistical probes were obtained. The first trial results were obtained in simple raw form; later on, and due to the spread of responses, data was grouped together or collapsed, placing similar answers together. As such, the analysis was more meaningful. The methods of analysis used to analyze the data and determine the index is explained in detail below in progressive sequence.

4.10.2. Methodology to calculate the index of success

Based on the selection of RBV theory, on the questions posited in the questionnaire and on personal experience, the index was designed as the most suitable method to compare and analyze research findings in terms of objectives. The variables used are selected as per literature and on the subjective feelings of the researcher. To calculate it, the SAS program for diminishing data was used, variables that determine success were indicated, weights were assigned as per program and the most relevant variables were examined. 10 variables were chosen as the most verifiable indicators of success as per program and literature. Below is the decision factors used to calculate variables qualifying for the index. The variables selected for the success index follow as well as the decision factors:

```

IF INDICE>75 THEN INDC=1;
ELSE IF 75>=INDICE>65 THEN INDC=2;
ELSE IF 65>=INDICE>55 THEN INDC=3;
ELSE IF 55>=INDICE>40 THEN INDC=4;
ELSE INDC=5;
RUN;
/*****
PROC FORMAT;
VALUE INDCN 1='Highly Successful'
            2='Very Successful'
            3='Successful'
            4='Not Well'
            5='Failing';
run;

```

Resulting variables to be used in the index.

P4	Years the owner has been in business
P7	Level of education

(P27-P26)	Average sales last year and 3 years ago. Trends determination
P40	Level of success attained
P122	Last year performance relative to objectives-overall profit
P126	Last year performance to objectives –return on investment
P143	How is your firm financially compared to last year
P144	Have you reached your plans in terms of sales?
P168	Net profit on sales obtained
P170	Attractiveness of the market

Once the index was determined, variables relevant to the analysis were compared to it and analyzed accordingly.

Note: Since selecting the variables used meant running different programs, any respondent whereas the chosen value of the variable had more than 2 missing value was rejected (2 were eliminated). See appendix sections for other running and variables crossings.

The idea of the index is to determine the level of “success”, dependent variable, at which this firms are analyze how “success” influences or is influenced by the independent variables. To determine these variables questionnaires were revised making sure none of the used variables had more than 10% missing values. Since quantitative data processed were 48 firms, no variables with more than 4 missing values were allowed into the analysis. Also, care was taken that none of the interviewed CEO’s answered the same category, meaning varied responses. This fell right into place, since the majority of firm complied with the condition, no firm answered in the same manner. Moreover, the questionnaire had 207 variables, in a certain way too many, making it considerable difficult to work with all of them. Therefore, using “trial and error” variables that could both indicate success and derive significant results were located.

4.10.3. Constructing the index.

Since constructing the index has to be done in a stochastic not deterministic manner (based on the researcher choice and feelings), we then selected a statistical technique that would allow gathering the information relative to success for this 10 chosen variables. This procedure is done using Principal Component, and Factorial Analysis. Since the variables

were categorized, a search for another technique that could do the job without supposing the variables is interval scales. As such, two (2) techniques are known: multiple correspondence analyses and the system of transforming categorical data to interval scale and then apply a technique for interval analysis PRINQUAL. This is an analysis of principal qualitative components procedure is a data transformation procedure that is based on the work of Kruskal and Shepard (1974) who also refers to other works on the subject by (Young, Takane, and de Leuw (1978); Young (1981); and Winsberg and Ramsay (1983).

4.10.4. How the model was applied

Moreover, once the statistical technique was chosen, the 10 chosen variables are organized in such a way that the higher the value of the variable the highest the success of the firm. This was done in an intuitive manner but mostly it followed the hypothesis formulated and the literature reviewed. Exception are the variables education (p7), self rated market positioning (p30), how did the owner ensured plans materialized (p135), and how the owner compares his firms performance, financially to the previous year (p143). These variables were organized in a different manner. The transformation procedure was detailed includes analysis of variance and t-test are used (this are used to search if there are differences among the different categories of the average obtained by the index of success).

The PRINQUAL procedure provides three methods of transforming a set of qualitative and quantitative variables to optimize the transformed variables' covariance or correlation matrix. PRINQUAL technique was applied. This technique is used to quantify data, transforming from categorical to continuous data. It allows for statistical processing numerical variables or data to quantify the variables, using the transformed or grouped data. Thus, Principal Component Analysis was utilized to reduce dimensionality and to construct

the index. The transformed data was multiplied by the factorial coordinate (factorial coordinate) on the first axis of the principal component analysis; next the values are re-scaled to a scale of 0-100. This becomes the index, which from now on will be used for the analysis of results.

The index is used to determine which of the other variables not used in the index show an indication or not of success for any firm. At this stage analysis, variance and t-test are used (this are used to search if there are differences among the different categories of the average obtained by the index of success). Likewise, the PRINQUAL procedure is used and provides three methods of transforming a set of qualitative and quantitative variables to optimize the transformed variables' covariance or correlation matrix. These methods are: maximum total variance (MTV), minimum generalized variance (MGV), and maximum average correlation (MAC).

For this research MTV method was used. This system transforms the variables to maximize the variance accounted for by a few linear combinations (using the MTV method) locates the observations in a space with dimensionality that approximates the stated number of linear combinations as much as possible, given the transformation constraints. Transforming the variables to minimize their generalized variance or maximize the sum of correlations also reduces the dimensionality. However, all three methods attempt to find transformations that decrease the rank of the covariance matrix computed from the transformed variables.

The PRINCOMP⁴⁶ procedure was also used for the model design. This procedure performs principal component analysis. As input raw data is used; a correlation matrix, a

⁴⁶ This is an analysis of principal qualitative components procedure; it is a data transformation procedure that is based on the work of Kruskal and Shepard (1974); Young, Takane, and DeLeeuw (1978); Young (1981); & Winsberg &

covariance matrix, or a sums of squares and cross products (SSCP) matrix was implemented. Output data sets containing eigenvalues, eigenvectors, and standardized principal component scores were calculated at this stage. Given a data set with p numeric variables, p principal components can be calculated.

Thus, each principal component is a linear combination of the original variables, with coefficients equal to the eigenvectors of the correlation or covariance matrix. The eigenvectors are customarily taken with unit length. The principal components are sorted by descending order of the eigen values, which are equal to the variances of the components. Principal components have a variety of useful properties as illustrated by Kruskal et al in 1974, including works by Rao, 1964 and Kshirsagar 1972 (see appendix for this calculation)⁴⁷. Moreover, after the vectors were transformed, the Princomp procedure was used to run the success index, considered the dependent variable for this research. Anova analysis was also calculated. Once the index was designed and implemented, the analytical tools described were used to prepare the report.

To ease understanding, tables and graphs were prepared and crossed to significant variables against the index. The objective of using this test is to determine if the dependent variable, firm performance, differ across categories or not. An example of using this test is if the index is the same across sex and size, or if it varies. For the purpose of this dissertation, only variables that were considered meaningful are considered and used. Meaningful difference means that there is no difference between the variables and the index. Variables that came out as independent are not included.

Ramsay (1983).

⁴⁷ The PRINQUAL procedure obtains linear and nonlinear transformations of variables by using the method of alternating least squares to optimize properties of the transformed variables' covariance or correlation matrix. Non-optimal transformations for logarithm, rank, exponentiation, inverse since, and logit are also available.

Furthermore, Duncan test was also used in conjunction with Anova and to test if the means of the categories analyzed are equal or different. In addition spearman correlation coefficients are used in order to evaluate the magnitude or treatment effects for a design involving independent samples. Finally, since results were analyzed under a very strict model, findings are more stringent than necessary. As such, implications are more reliable than appear at first sight.

Next, information from this analysis is compared to literature and empirical findings. Since the constructed model is very strict (63% of responses and much more than proposed) many of the firms in the highly successful and successful list have attained upper levels of success than appears to be. Lastly, and after analyzing all data, a search for implications was sought with the objective of potentially being able to relate findings to other research as well as to the results presented here.