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RESOURCES IN SMALL FIRMS: AN EXPLORATORY STUDY

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ABSTRACT

The importance of resources to firms is well documented in theory, texts and empirical studies. Yet, research focuses on acquisition of financial resources, with less attention given to other types. Prescriptions emphasize resource allocation or fit to opportunities, often treating resources in the aggregate without considering unique distinctions in resource types or usage. This paper argues that there are five distinct types of resources applicable to small firms-human, social, organizational, physical and financial. An exploratory study of 76 firms examines the relative importance of these resource types and analyzes relationships between resources and characteristics of the owner/founder and organization. Findings show overall higher ratings for physical and organizational resources than for financial resources. Results indicate few differences in resources depending on owner/founder characteristics or industrial sector.

INTRODUCTION

Tanya Sims and Rose Maybin of B & S Diversified, a $5 million electrical contracting firm, needed a server based computer network to manage information and to connect their 46 electricians and project managers (Nation's Business, Feb. 1996, p. 47). Alternatively, James Wilcoxon, founder of Paddock Swimming Pool Company, needed office workers who were computer trained in order to be effective telecommuters, a move designed to increase productivity and decrease commuting time in traffic for the company's 50 employees (Nation's Business, Nov. 1995, p. 41). For Ruth Meric, of Ruth Meric Catering, a $1 million full service firm, her contacts with the Baylor College of Medicine allowed her to develop a diet modification program as a basis for creating sales in the early stages of business development (Nation's Business, Feb. 1996, p. 6). In contrast, Marine Power needed $1 million in venture capital to conduct research and development that would facilitate the company's ability to convert standard General Motors engine blocks for marine use in boats (Nation's Business, March, 1996, p. 14). These four examples reflect the importance of different types of resources for these ventures; physical, organizational, social networks, and financial capital. The purpose of this paper is to explore the contributions of various types of resources which are a part of small firms and the relationships of those resource types to characteristics of the owner(s) or founder(s), the firm, and each other.

Resources are essential to the creation of new ventures and the growth of small firms. Considerable prescriptive and descriptive literature from entrepreneurship is organized around the process of allocating resources to exploit opportunities (Stevenson & Gumpert, 1985). It is proposed that opportunity identification is followed by acquisition and allocation of resources to build the organization (Vesper, 1990; Gartner, 1985). Moreover, resources in new and small ventures are generally scarce, and decisions about acquisition and/or allocation can be critical to survival (Cooper & Dunkelberg, 1986). This situation is intensified by increased globalization of the environment which creates new sources of resources and competition for existing resources. Therefore it becomes increasingly important for small firms to choose the types of resources that allow them to compete effectively.

Despite the critical nature of resources in entrepreneurial endeavors, there are comparatively few studies examining various types of resources or their role in small firms. Some studies combine all resource types (e.g. social, human, financial) together and relate these to performance (Bates, 1985), while others recognize the relationship among types of resources only implicitly (Dollinger, 1995; Robinson & Sexton, 1994). Cooper, et al. (1991) made relationships among types of resources more explicit by proposing the use of a resource profile to predict firm failure, survival and growth. Chandler and Hanks measure several types of resources and examine their combined effect on performance relative to other variables (1994).

Prescriptions in entrepreneurship texts regarding identification, assembly and allocation of specific types of resources are limited. Most texts focus on the importance of financial resources, and recognize the contribution of the human resources of the owner/founder(s) (see for instance, Hisrich & Peters, 1995; Vesper, 1994). The relative importance of social (i.e. networks) or organizational resources (systems, alliances, capabilities) are often given less attention. These discussions fail to recognize how these strategies should vary depending on resource type. Hence a better understanding of the types of resources used in small businesses and a consideration of how these resources relate to characteristics of the owner/founder(s) or the overall firm organization can help us better understand how to approach and analyze the resource assembly.

Given this lack of research in entrepreneurship and the corresponding importance of resources generally, this paper explores types of resources and their relative importance in a sample of small firms. We draw from the field of strategic management which offers a theory of the firm based on resources as the determinant of a firm's reason for existing, size, scope and growth (Penrose, 1959; Connor, 1991). We especially emphasize the recognition of the firm as a heterogeneous bundle of resources, uniquely combined in each firm (Penrose, 1959).

LITERATURE REVIEW

The resource based perspective of a firm provides a helpful theoretical framework for discussing the internal resources of firms of all sizes. This view, rooted in the field of Strategic Management, defines resources as "*all tangible and intangible assets that are tied to the firm in a relatively permanent fashion*" (Caves, 1980; Wernerfelt, 1984; Penrose, 1959; Mosakowski, 1993). It is argued that the resources controlled by the firm are heterogeneous, may be relatively immobile (Barney, 1991), and are both tangible and intangible. The combination of resources (Penrose, 1959) and sequencing of these over time (Amit & Shoemaker, 1993) allow for the evolution of specific capabilities which optimally lead to a competitive advantage. For new ventures, achievement of a competitive advantage may be an ultimate but not immediate goal. Instead, survival or successful acquisition of resources may be primary objectives (Churchill & Lewis, 1983).

Resource categorizations are proposed throughout the fields of strategic management and entrepreneurship. Early categorizations included physical (inventory, plant), monetary (money, credit), and human (Ansoff, 1965); money and people, both technical and managerial (Learned et al., 1965) and material, technical, financial, and managerial (Andrews, 1971). Hofer and Schendel (1978) expanded the discussion of the resource categories and proposed a resource profile consisting of human, organizational, financial, physical, and technological. The financial and physical resource categories are largely self-explanatory, however, the remaining categories require some additional consideration. Human resources include: "scientists, engineers, production supervisors, sales personnel and financial analysts" (1978, p. 145). In other words, under this profile human resources include all individuals within the organization. Organizational resources include, "quality control systems, short-term cash management systems, and corporate financial models" while technological resources (or capabilities) are "high-quality products, low-cost plants, and high brand loyalty" (1978, p. 145). These categories are most often applied and work well in the context of large, corporate structures, however, we suggest they are less useful in the analysis of new or small firms.

The category of technological resources also raises questions for small firms. As defined by Hofer and Schendel (1978) this category assumes that products, plants, and brands are an integral part of the business. While it is reasonable to substitute services for products, it is also reasonable to recognize that many small firms do not deal with plants and brands. This category also raises other issues, such as what is considered technology and what role does it play in the business. In many ways the category causes more questions to be posed than answered.

Dollinger (1995) provides the most specific discussion of resource categories, expanding upon the Hofer and Schendel (1978) categorization scheme by adding a "reputational" resource category and discussing how these resources would add value to the firm. This new reputational category includes "...the perceptions that constituents in the firm's environment have of the company" (1995, p. 34). Dollinger also draws from Prahalad and Hamel (1990) in their recognition of organizational resources as core competencies. These competencies are shown to include the "firm's structure, routines, and systems" (Dollinger, 1995, p. 34).

Chandler and Hanks (1994) posit and empirically test the relationship between market attractiveness, resource-based capabilities, and firm performance. This research also explored the "fit" between these and competitive strategy, and the authors found varying degrees of support for their hypotheses. Measures of resources followed Hofer and Schendel's (1978) categories, however, the analysis aggregated all resources rather than examining separate contributions of different categories.

Taken together, this work suggests the need for a more systematic and comprehensive framework of resources which can be used as a basis for investigating resource types, and exploring how these relate to different characteristics of the owner/founder(s) and firm. We propose a typology containing five categories of resources which are displayed in Table 1. These resource categories are human, social, organizational, physical and financial.

Table 1
Resource Categories for New Ventures

Resource Type	Definition	Associated Authors
Human	achieved attributes	Becker, 1964
	education and experience	Cooper, 1981
	reputation	Dollinger, 1995
Social	relationships and networks	Bourdieu, 1983
	family	Liebenstein, 1968
	race and ethnicity	Glade, 1967
	political connections	Glade, 1967
Physical	tangible assets necessary for business operations	Hofer & Schendel, 1978
	facilities and equipment	Hofer & Schendel, 1978
	technology	Dollinger, 1995
Organizational	organizational relationships, structures, routines, culture, knowledge	Tomer, 1987 Hofer & Schendel, 1978 Dollinger, 1995
Financial	funds used to start and grow the business	Bygrave, 1992

The major differences between this categorization scheme and those previously suggested are found within human, social, and organizational resources. The category of human resources is expanded from the acquired attributes (education and experience) originally described by Becker (1964) to include other elements relevant to the entrepreneur(s) such as judgment, insight, creativity, vision, and intelligence (Cooper, 1981; Dollinger, 1995).

However, we emphasize that these are the attributes of the owner/founder or founding team and that this category does not include those same attributes as found in other organizational members.

Social resources are based upon the work of Bourdieu (1983) to include the personal networks and social learning experiences of the entrepreneur(s). Early work in the entrepreneurship field emphasizes the importance of family and ethnic relationships (Glade, 1967; Leibenstein, 1968) and both relationships and social learning are seen as particularly important to the marshaling of resources.

Organizational resources are based upon the work of Tomer and are "human capital in which the attribute is embodied in either organizational relationships, particular organization members, the organization's repositories of information, or some combination of the above in order to improve the functioning of the organization" (1987, p. 2). Employee resources, formal and informal systems, and organizational alliances are included in organization resources. It is this category which allows us to explicitly account for the contribution of other organization members and the systems throughout the firm.

Our interest for this paper is to identify the types of resources in a sample of small firms, and explore the relationship between these five categories of resources and selected characteristics of the owner/founder, and the venture. A better understanding of the types of resources will provide insights into the bases for decisions guiding strategies for resource allocation and commitment. We expected some types of resources to be more important than others generally, and specifically, depending on characteristics of the owner/founder and the firm. Four research questions guided this study :

1. What are the resource types reported in small firms?
2. Are there differences in resource types depending on the gender of the owner/founder?
3. Are there differences in resource types depending on the industrial sector of the firm?
4. Are certain resource types related to characteristics of the owner/founder or firm?

METHOD

A sample of 410 small firms were identified from 7 national industry directories. Companies were selected according to three different industry categories; primary, secondary and tertiary (Buckley & Brooke, 1992). The categorization scheme is based upon the level of the technology applied within the industry. Primary industries are the most basic and include agriculture, extraction, and mining businesses. Secondary includes most types of manufacturing and the tertiary industry includes the service and retailing sector. The tertiary sector also includes most businesses considered 'high tech.' This stratification is used to better understand potential differences based upon industry effects. Companies were identified by 4 digit Standard Industrial Codes (SIC) within each industry stratification, and 3 separate industries were considered within each SIC. Substantial efforts were made to obtain survey responses. All respondents were contacted by phone prior to the mailing. Reminder post-cards were mailed six weeks after the survey was mailed, and telephone calls were made two weeks after the postcard mailing to encourage response.

Measures of performance were those identified as most frequently employed by entrepreneurship researchers (Brush & Vanderwerf, 1992), and included measures of revenues and financial ratios. Characteristics of the owner/founder were used previously by Brush and Hisrich (1991) and Cooper & Gimeno-Gascon (1992). For the purpose of this study these measures were limited to include gender, age, and marital status. The company characteristics measured included industry sector, age of the firm, and percent ownership interest of the respondent.

Resources were measured using five point Likert scales which asked respondents to rate their favorabilities across resource types (1=highly unfavorable, 5= highly favorable). Items were identified from previous studies (Chandler & Hanks, 1994) as well as conceptual works in entrepreneurship (Bruno & Tyebjee, 1982; Vesper, 1990). Resources were grouped into two categories for ease of response, personal (5 items) and company (11 items) and both categories were checked for the reliability of the scales (alpha .82 for personal, and alpha .75 for company). Experience, the number of years in the firm and the number of years in the position were recoded to match the other scaled items.

Human resources include Experience Types, Experience Amounts, and Education. Social resources and physical resources represent Personal Networks and Up To Date Equipment and Computer Technologies respectively. The financial resource variables measure Access to Debt, Access to Equity, and Domestic Profits. Organizational resources consist of Organizational Procedures and Firm Employees.

The study is limited by several conditions. First, the sample is small and the measures of resources used represent the respondent's perspective at a particular point in time. A larger sample size would provide for increased generalizeability of the findings to various types of businesses. The study over time of these resources would also add a desirable dimension to the project. In addition, the sample was drawn from specified trade associations and further research is necessary in those industries not covered in this study. Instead, this project provides the groundwork for the understanding of resource building blocks in certain types of small firms.

MAJOR FINDINGS

From a sample of 410 business owners we received 76 usable responses for a response rate of 19%. Consistent with our sampling, 36.7% of the respondents were female, while the industry sectors represented our three level stratification. Accordingly, 28.6% were computer or telecommunications related, 14.3% were in the medical area, and 12.9% were oil or gas companies. The average sales figure for 1994 was slightly over $10.5 million, while the average full time equivalent employees was 31. The average age of the firms was five years, with starting years ranging from 1946 to 1995. Nearly 90% of the respondents were chief-decisionmakers (Presidents or CEO's), and 75% owned more than 51% of their businesses. The following sections present results of our analysis.

1. Resource Types in Small Firms

To address our first research question regarding the resource types of the firms, we ran descriptive statistics for all the variables. The average score for each type of resource provides a profile of the categories indicating the relative importance of each variable. The variables with the highest averages were Equipment (4.06), Prodsvc (unique products and services) (3.94), and Networks (3.84). These variables, respectively measures of physical, organizational, and social resources, illustrate the importance of varied resource types. The three variables with the lowest means were Years in Position (1.69), Years in the Firm (1.87), and Multilingual Staff (2.69), the first two variables representing human resources and the last a measure of organizational resources. The ratings for the two experience variables, Years in Position and Years in the Firm are not surprising given the relatively young age of the companies, the average being less than 5 years. Other human resource variables (International Work Experience, Marketing Expertise, and Telecommunications/Technology Expertise) were perceived somewhat more favorably. On the whole, the human resource variables were relatively lower than the rating of all other types of resources except financial. Similarly, organizational resources and social resources are also rated more highly than financial resources.

2. Resource Differences by Gender of the Owner/Founder

We next examined whether the importance of resource types varied based on the gender of the owner/founder(s). Table 2 provides the descriptive statistics for each group, and includes results of t-tests for differences between the means. The only significant difference between resource profiles of male and female-owned businesses was in the human resource category, favorability of Telecommunications/Technological Expertise. These results suggest that importance of resource types in the firm does not vary significantly depending on the gender of the owner. The significance of Telecommunications/Tech. Expertise seems to support recent statistics indicating that a smaller percentage of women graduate with computer science or engineering degrees, or begin businesses in these areas (Wall Street Journal, 3/18/94).

The means of all resource categories across gender groups are quite similar, even with regard to perceived favorability of financial resources. This result adds to the mixed findings to date regarding whether women face disadvantages in access to financial resources such as bank loans or equity deals (Fabowale, Orser, and Riding, 1995; Fay and Williams, 1993; Brush, 1992; Buttner and Rosen, 1989). However, generalization of this beyond this study is limited by the small sample size and the fact that the resource measures are only a snapshot of resources at a particular point in time.

3. Resource Differences by Industrial Sector of the Small Firm

Our next step was to examine possible variation in resource types based on industry sector. (See Table 3). We believed differences across resource types might be evident depending on industrial sector, for example, service or high tech might have a different profile from agriculture or mining. This analysis also yielded few significant differences and all

Table 2
<u>Means, Standard Deviations, and t-test Results</u>
<u>Full Sample and Gender Comparison: Resource Measures</u>

	Full Sample	Male n=44	Female n=28	t-test
HUMAN RESOURCES				
Intnl work experience	3.82	3.92	3.63	0.86
	1.28	1.11	1.53	
Marketing experience	3.48	3.61	3.24	1.18
	1.21	1.05	1.39	
Expertise: tele/tech	3.77	4.03	3.36	**2.12***
	1.25	1.00	1.47	
Years in firm	1.87	2.00	1.64	1.50
	.98	1.14	0.62	
Years in position	1.69	1.71	1.61	0.51
	.87	1.02	0.57	
Years of education	3.16	3.20	3.10	0.40
	1.05	1.02	1.11	
Intnl Bus Education	3.27	3.36	3.13	0.73
	1.18	1.04	1.39	
SOCIAL RESOURCES				
Personal Networks	3.84	3.97	3.60	1.16
	1.25	1.17	1.35	
ORGANIZATIONAL RESOURCES				
Employees -intnl exp	3.14	3.30	2.92	1.07
	1.35	1.15	1.63	
Multilingual staff	2.69	2.69	2.68	0.04
	1.43	1.37	1.57	
Strategic Alliances	3.61	3.73	3.35	1.10
	1.31	1.23	1.40	
Customer svc capabilities	3.66	3.53	3.85	1.18
	1.06	1.10	1.01	
Operating efficiencies	3.78	3.70	3.88	0.76
	.95	0.88	1.07	
Cost structure	3.72	3.60	3.88	1.21
	.93	0.93	0.93	
Unique prods/services	3.94	4.02	3.74	0.94
	1.16	1.15	1.17	
PHYSICAL RESOURCES				
Equipment	4.06	4.13	3.96	0.67
	.96	1.02	0.89	
FINANCIAL RESOURCES				
Access to debt	3.05	3.20	2.78	1.32
	1.18	1.13	1.24	
Access to equity	3.26	3.44	2.87	1.83
	1.23	1.18	1.22	
Domestic profits	3.20	3.24	3.09	0.48
	1.21	1.09	1.41	

* p<.05 ** p<.01 *** p<.001

Table 3
Means, Standard Deviations, and t-test Results: Resource Measures and Industry Sectors

	Industry					
	Primary n=10	Second n=21	Tertiary n=20	t-test (1v2)	t-test (2v3)	t-test (1v3)
HUMAN RESOURCES						
Intnl work experience	4.25	3.80	4.00	0.8	0.53	0.5
	1.49	1.28	1.03			
Marketing experience	3.50	3.48	3.74	0.05	0.66	0.5
	0.93	1.23	1.20			
Expertise: tele/tech	3.88	3.14	4.71	1.46	**-4.66*****	**-2.29***
	1.13	1.24	0.69			
Years in firm	2.80	1.76	1.90	**2.89****	0.59	**2.19***
	1.40	0.63	0.85			
Years in position	2.30	1.67	1.70	1.95	0.16	1.66
	1.25	0.58	0.73			
Years of education	3.18	3.43	2.80	0.6	1.89	1.15
	0.87	1.21	0.89			
Intnl Bus Education	3.75	3.05	3.39	1.55	0.9	0.74
	1.04	1.08	1.20			
SOCIAL RESOURCES						
Personal Networks	4.38	3.85	3.68	1.03	0.44	1.3
	1.41	1.14	1.20			
ORGANIZATIONAL RESOURCES						
Employees -intnl exp	3.38	2.81	3.61	0.97	1.97	0.5
	1.30	1,44	1.04			
Multilingual staff	3.38	2.55	2.65	1.38	0.21	1.09
	1.69	1.32	1.50			
Strategic Alliances	3.38	3.90	3.41	1.04	1.13	0.06
	1.19	1.21	1.42			
Customer svc capabilities	3.89	3.33	3.89	1.41	1.6	0.01
	0.92	1.02	1.20			
Operating efficiencies	3.78	3.57	4.05	0.49	1.55	0.74
	0.97	1.08	0.89			
Cost structure	3.56	3.62	2.80	0.6	0.93	1
	0.73	1.21	0.89			
Unique prods/services	3.75	3.89	4.20	0.24	0.94	1.02
	1.58	1.23	0.77			
PHYSICAL RESOURCES						
Equipment	4.44	3.95	4.20	1.54	0.77	0.6
	0.53	0.89	1.15			
FINANCIAL RESOURCES						
Access to debt	3.11	3.11	3.07	0.01	0.1	0.1
	1.45	1.24	0.80			
Access to equity	3.00	3.29	3.56	0.56	0.67	1.15
	1.23	1.31	1.15			
Domestic profits	2.89	3.20	3.38	0.58	0.42	0.9
	1.45	1.28	1.20			

* $p<.05$ ** $p<.01$ *** $p<.001$

[a] 15 of the respondents' industrial sectors were not able to be classified and therefore were not included in this part of the analysis.

differences found were in human resources. Not unexpectedly, Telecommunications/Technology Expertise was significantly different for the category representing service and high tech industries (tertiary sector) than for the other two sectors. Further, the owner/founder(s) in the primary industries had been with their firms for longer periods of time.

We further tested the variation in resource types based on the company characteristics of business size, measured both by number of full-time equivalent employees and the level of sales. These analyses also offered no significant differences between larger and smaller businesses by either measure of size.

At this point, given the few differences among groups, we decided to reduce the large number of variables comprising each resource type in order to simplify the analysis. Using factor analysis we obtained six factors quite similar to our pre-defined categories of resources: Experience Types, Organizational Procedures, Organizational Competence/Expertise, Finance Access, Owner/Founder Years of Experience, and Owner/Founder Years of Education. Results of this analysis are reflected in Table 4.

Table 4
Factor Loadings of Resource Descriptors

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Resource Categories	Org.	Org.	Org.	Finance	Human	Human
Descriptors:	*Experience Types*	*Organization Procedures*	*Organization Competence/ Expertise*	*Finance Access*	*Owner/ Founder Years Experience*	*Owner/ Founder Years Education*
Intnl work experience	.68					
Marketing expertise			.55			
Intnl business education	.48					
Expertise: tele/technology			.73			
Years in firm					.94	
Years in position					.94	
Years of education						.91
Access to debt finance				.89		
Access to equity finance				.91		
Domestic profit				.59		
Strategic alliances	.42					
Multilingual staff	.87					
Employees -intnl exp.	.86					
Customer svc capabilities		.76	.43			
Operating efficiencies		.83				
Cost structure		.84				
Unique products/services			.84			
Variance on factor	29.5%	12.3%	10.8	9.1%	7.6%	6.3%
Eigenvalues	5.02	2.09	1.84	1.54	1.29	1.07

Experience Types (a human resource) was found to be the strongest factor, accounting for 29.5% of the variance. This factor contained several variables we had expected to load onto the Organization Competence/Experience factor, somewhat confusing our measures of owner/founder and employee experiences and expertise. A possible explanation is that owner/founders with higher levels of experience frequently have more relationships, contacts, and opportunities to hire staff with similar areas of experience (Birley, 1985; Cooper & Gascon, 1992). Therefore, both owner/founder(s) and employees would look more alike for this particular measure. Similarly, human capital variables (Marketing, Telecommunication/Technological Expertise) combined with organizational level variables (Customer Service, Unique Products/Services) in the factor Organization Competence/Experience. We reasoned that although the Marketing and Telecommunications/Technological Expertise was that of the individual respondent, in fact these areas represented functional capabilities of the organization, often referred to as "knowledge based resources" (Black & Boal, 1994). Further, the other two variables loading on the Organization Competence/Experience factor- customer service and unique products/services-also can be considered organizational capabilities. While our factor analysis yielded a slightly different categorization of the variables than expected, the major resource categories we had predicted were apparent.

4. Resource Relationships

We were also interested in learning whether certain types of resources were related to particular owner or firm characteristics and whether these potential relationships suggest a strength or weakness. Using Pearson's Correlation we identified six significant relationships. Results of this analysis are shown in Table 5.

Years of Owner/Founder Experience was significantly related to three firm characteristics (two in a negative direction) and one individual variable. Several of the relationships are a natural outcome of time passing. Age of the respondent was significantly related to Owner/Founder Years of Experience, showing that the older the individual, the more years of experience he/she is able to accumulate. The negative association between Owner/Founder Years of Experience and Age of the Firm is curious because this implies that the older the business, the less experience will be characteristic of the owner. A possible explanation is that our sample may contain several second generation owners. The negative association between the Industry and Owner/Founder Years of Experience is easier to explain in that younger individuals with less experience are frequently involved in our tertiary industry (high-tech and service areas). The positive relationship between Owner/Founder Years of Experience and their Percentage Ownership supports the idea that more experienced owners have acquired greater ownership interest in their businesses.

The Age of the Firm is correlated with Organization Competence/Expertise. This suggests that as the venture becomes established, it attracts or develops stronger organizational capabilities. And finally, the positive relationship between the number of Employees and Organizational Procedures illustrates the increased development and use of organizational systems as the number of people working in the organization increases (Churchill & Lewis, 1983).

Table 5
<u>**Correlation Analyses**</u>
<u>**Individual and Company Characteristics and Resource Descriptors**</u>

Resource Categories	Factor 1 Org.	Factor 2 Org.	Factor 3 Org.	Factor 4 Finance	Factor 5 Human	Factor 6 Human	Social	Physical
Descriptors	*Experience Types*	*Org Procedures*	*Org Competence/ Expertise*	*Finance Access*	*Owner/ Founder Years Experience*	*Owner/ Founder Years Education*	*Personal Networks*	*Equipment*
Individual Characteristics								
1. Age					$.25^{*}$			
2. Gender								
3. Marital Status								
Company Characteristics								
4. Age of firm			$.25^{*}$		$-.44^{***}$			
5. Industry					$-.43^{***}$			
6. % Ownership					$.31^{*}$			
7. Sales 1994								
8. Employees 1994		$.38^{***}$						

$^{*}p<.05$ $^{**}p<.01$ $^{***}p<.001$

CONCLUSIONS AND IMPLICATIONS

Our study builds on earlier work by refining the measures of types of resources as appropriate for the analysis of new and small firms. Results of this study show that business owners rated physical, organizational, and social resources relatively more favorable and human and financial resources less favorable. In other words, the respondents reported more positive perceptions of their firm's tangible assets, products or services, and personal networks as resources. Few significant differences based on individual or firm characteristics were evident. This finding implies that among small firms, these characteristics do not distinguish among resource profiles.

Alternatively, another possible explanation for lack of differences based on firm and owner/founder characteristics may be related to stage of development. All the ventures in this sample were fairly young. Other authors have argued that organizational characteristics, strategic problems and other aspects are similar across stages of development (Churchill & Lewis, 1983). It is possible that resource profiles also are similar and that variations are seen in very early or very late stages of business growth. Analysis of resources types across stages of development of the business is another future direction for research.

Findings from this study inform us about the satisfaction of the owner/founder rather than absolute levels of resources. For instance, a respondent may report a highly favorable perception towards physical resources, measured here as Up-to-date Equipment and Computer Technologies. For a respondent in the primary industrial sector this may mean the business owns extensive and expensive equipment and physical materials used in extraction activities. On the other hand, a respondent from the tertiary sector may report an identical favorability score on physical capital but in this context the perception is based upon a service business leasing the latest in desktop technology and sharing a telecommunication system with several other businesses. The important outcome is that the combination of resources controlled is appropriate for the context (Stevenson & Gumpert, 1985).

The factor analysis raised questions of both content and methodology. Our theoretical framework requires the separation of characteristics of the owner/founder(s) from the characteristics of other individuals employed within the business. This point is based on the increased value gained by the business from human capital characteristics of the owner/founder(s). The results of the factor analysis were somewhat problematic regarding the separation of the human capital of founders and employees. Future measurement of resources must continue to more completely differentiate between the sources and the components of human capital. On the other hand, the results do support our contention that the human capital of the founder is separate from others in the company. The factor analysis also implies that organization resources may need to be treated with a finer grained analysis or subcategories; experience, procedures, and competencies.

This research has important implications for owner/founder(s) of new and small firms, both specifically and more generally. The preliminary specific implications are as follows. First, the results showed that human capital is perceived to be less valuable than what you own (physical resources) and who you know (social resources/personalcontacts). This is important because human capital (i.e. achieved attributes such as education, experience, and reputation) is clearly integral to firm success. However, these results imply that owner/founder(s)may not be recognizing them as sources of value to the firm.

Second, the results show that the strategic importance of resources seem to be driven by the needs of the business, not the gender of the owner/founder. This shows the positive aspects of need-based managerial decision making and suggests this is an area where gender is less important.

Third, the lack of industry sector differences suggests that there are types of resources valued for any business. While industrial differences may become evident with a more finer grained analysis, a core of foundation resources are perceived favorably across all three industry categories.

Third, retaining ownership of the firm is an important issue for new and small venture owner/founder(s),especially in those firms that require external financial capital. These results show that the owner/founder(s)years of experience may be key to retaining ownership. More specifically, owner/founder(s) with greater experience may be able to negotiate better equity retention with the providers of financial capital.

More generally, this research shows that while some variations in importance of resource types are evident, with physical resources, organizational resources, and social resources outranking human resources, our exploratory analysis showed few differences in resource profiles. This implies that strategic considerations about resource choices are more important than personal attributes. For the owner/founder(s), resources might be considered according to the following questions: 1. What is the composition of human, social, organizational, physical, and financial resources in my firm? 2. Which resources are most salient given the business opportunity pursued? 3. Which resources support a unique advantage that can not be easily imitated?

Owner/founder(s)can benefit from greater awareness of the types and combinations of resources in their firms since strategic choices about the allocation and commitment of resources depends on existing resource configurations. As some natural resources become more scarce and technology and information resources more prolific, firm owners will need to be more aware of resource types, configurations, and application strategies.

This research has implications for academics as well. The analysis of resource types in small firms lends support to the resource based view that each business is comprised of a combination of resources (Barney, 1991; Penrose, 1959). This research provides descriptive information about the importance of various categories of resources and is the first systematic examination of this topic in small firms. However, the implications must be tempered with caution because whereas the resource measures presented in this research are the results of owners perceptions of resource importance, it will be left to our future research to link these configurations with firm performance or success.

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