

**THE IMPACT OF RESOURCES  
ON SMALL FIRM INTERNATIONALIZATION**

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**ABSTRACT**

*Theory posits that resource type and composition determine a firm's geographic scope. To date, few studies test this premise. This article compares resource profiles of internationalized and non-internationalized small firms, then examines the impact of five types of resources on their internationalization strategies. Results show that resource profiles differ between internationalized and non-internationalized firms, and that social and financial resources are more important than human resources for small firms pursuing an internationalization strategy. For firms selling a greater variety of international products, achieved owner founder attributes need to be strong. Small firm managers should build a solid social network and develop international competencies if they plan to internationalize.*

**INTRODUCTION**

Recent advances in technology and changes in government policy make it easier for small firms to internationalize. The telecommunication revolution of the past twenty years has improved the access of small firms to their customers, suppliers and overseas distribution channels. Widespread government assistance programs offer counseling for small firms wishing to export by providing advice on foreign trade laws, international finance, and by helping firms to identify potential customers (Moini, 1998; *Nation's Business*, 1998). It was estimated that more than 30% of all US exporters are small firms, (*Nation's Business*, 1998), and that more than 96% of a small firms' potential customers are located outside the United States (*Nation's Business*, 1998). A U.S. General Accounting Office report states the number of exporting small to medium-sized firms doubled over the past 5 years, and estimated that firms with less than 500 employees comprised 97% of total exporters in 1997, contributing more than one third of the total dollar value of US exports (<http://www.soho.org/Advocacy>). Hence, policy-makers often advocate *to succeed in a global world, small firms should go global.*

But, even with the increased opportunities and encouragement to pursue a policy of globalization, internationalization is difficult. For example, it is still hard for small firms to form partnerships or alliances, and resource scarcity remains a problem (Karagozoglu & Lindell, 1998). Other data from a recent Dun and Bradstreet survey indicated that only six percent of the nation's small firms export, suggesting that even with appealing market opportunities and greater governmental assistance, selling abroad can be time consuming, intimidating and even risky for small firms. Therefore, the major challenge facing small business owners is not to determine *if* there are international market opportunities, but deciding *whether* to pursue them.

In this article, it is argued that the decision to internationalize ultimately depends on the resources and capabilities the firm has, or needs to compile, in order to effectively compete in international markets. However, for small firms that are inexperienced in internationalization, it is unclear if managers know whether or not they have the right resource profile for successful globalization. That is the purpose of this article. The following sections develop and then test a set of hypotheses that examine the impact of firm resources on internationalization. Findings suggest guidelines for managers that might be used when making internationalization decisions.

### BACKGROUND AND HYPOTHESES

To better understand the linkage between small firms and internationalization, the entrepreneurship literature was reviewed. A limited number of studies compared internationalized and non-internationalized firms, and of those that did, more than half were based on the stage theory of internationalization. Stage theory describes internationalization as a sequential and evolutionary process that involves the management of increasingly complex contingencies in progressively less similar markets (Johanson & Vahlne, 1977). Research using stage theory focuses on firm demographics (e.g., size, age), managerial background and perceptions, market commitment, and product attributes as the factors that motivate exporting (Cavusgil & Naor, 1987; Miesenbock, 1988; Naidu & Prasad, 1994; Gankema, Snuif, & Zwart, 2000). Although the stage theory has been criticized for its determinism (Melin, 1993) and overemphasis on country specific experience (Barkema & Drogendijk, 2001), many studies use this theory as the basis for studying small firm exporting. In their comprehensive review of export-development models Leonidou and Katsikeas note that: "almost all models view[ed] the firm's involvement in export operations as an evolutionary and sequential process, based on the fundamental assumption that export activity develops from a series of incremental decisions" (1996: 525).

In contrast, recent work developed from case studies of global start-ups argues that some companies may be international from inception (McDougall, Shane, & Oviatt, 1994). Based on the resource-based view of the firm, which argues that firm strategy is a function of the firm's unique stock of resources (Barney, 1991; Wernerfelt, 1984), the emerging international entrepreneurship perspective posits that a key difference between internationalized and non-internationalized new ventures lies in their *resource stocks*, which includes founder attributes, organizational dimensions and social contacts. While few studies have examined the influence of resources on internationalization, or compared resource profiles for domestic and internationalized firms, some recent research suggests that Small and Medium Sized Enterprises (SME's) strategies consider human resources and resource richness as factors leading to internationalization (Naidu & Prasad, 1994; Reuber & Fisher, 1997; Burgell & Murray, 1998). Table 1 compares the empirical findings of the stage theory of internationalization with the international entrepreneurship perspective.

**Table 1**  
**Literature Review Summary**

| Theory                         | Variables                              | Empirical Support   |  |  |  |
|--------------------------------|--|---|--|--|--|
|                                |  | Positive Findings   |  | Negative or Mixed Findings                                       |  |
| Stage Theory                   | Founder attributes                     | Bijmolt & Zwart, 1994; Calof & Viviers, 1995                                  | Founder attributes are critical in the decision to export  |  |  |
|                                | Firm Characteristics<br><br>Size & Age | Naidu & Prasad, 1994; Rynning & Anderson, 1994; Julian & Castrogiovanni, 1995 | Larger firms are more likely to export; while older firms have a greater breadth of geographic expansion | Rynning & Anderson, 1994; Leonidou, 1998                         | Mixed results suggesting other predictor variables or when examined in conjunction with firm resources |
| International Entrepreneurship | Founder Attributes                     | Reuber & Fisher, 1997   | TMT's international experience positively associated with speed to foreign market entry                  |  |  |
|                                | Firm Characteristics                   |   |  |  |  |
|                                | Size and Age                           |   |  | McDougall, 1989; Calof, 1993; Shrader, Oviatt, & McDougall, 2000 | Small size not a barrier for internationalization; firms internationalize at a young age               |
|                                | Resource Stocks                        | Bloodgood, Sapienza, & Almeida, 1996; Burgell & Murray, 1998                  | Levels of resources positively associated with degree of internationalization                            |  |  |

Penrose (1959, 1971) argues that, the firm's pre-disposition for growth, either in size or in geographic scope, is dependent on the firm's bundle of different and distinctive types of resources. Building on Penrose's argument, the entrepreneurship literature points out that resources have a crucial influence on firm growth and survival strategies (Stevenson & Gumpert, 1985), and that resource profiles are one of the principal factors explaining internationalization in new ventures (Oviatt & McDougall, 1994). Therefore it is proposed that:

***HYPOTHESIS ONE (H1) Resource profiles will differ between internationalized and non-internationalized firms.***

Besides expected differences between internationalized and non-internationalized firms, logic suggests that there will be variations with regard to the importance of specific resource bundles. If a firm's internationalization strategy draws on the resources of the organization, it is reasonable to expect resource variation to be related to the internationalization strategy pursued by the firm. So, for example, if the firm's internationalization strategy is based on serving a large number of markets (e.g., a strategy based on geographic scope), or conversely if the firm is targeting a smaller number of more specialized markets (e.g., a strategy based on scale), it is plausible that these strategies will be associated with different resource profiles. Therefore it is proposed that:

***HYPOTHESIS TWO (H2): Internationalized firms will have different resource profiles depending on their internationalization strategy.***

## METHODOLOGY

### Data Collection and Respondent Characteristics

This research was conducted in two phases. An exploratory study of 410 small firms was conducted where firms having less than 250 employees were identified.<sup>1</sup> These firms were randomly identified from publicly available directories, according to technology sector (Buckley & Brooke, 1992)<sup>2</sup>. In the first phase, 76 completed questionnaires were received, providing a response rate of 18.5%. The second phase used the same questionnaire and employed the same technology-sector sampling criteria. However, to improve the response rate, we identified trade associations related to each technology sector and personally requested their assistance in obtaining a list of firms. Prior to mailing, each firm was contacted to (1) identify key informants, (2) update the firm's name and address, (3) identify firms that had ceased operating, and (4) extract promises of cooperation in completing the questionnaire.<sup>3</sup>

For this second phase, we mailed 1120 questionnaires and used the Dillman (1978) multiple contact method. Fifty-nine questionnaires were returned with bad addresses, bringing the number surveyed to 1061. Two weeks after the initial mailing, a reminder postcard was sent to all firms except those from one trade association (financial services) who requested we contact their members only once. This first mailing resulted in 169 responses. A second mailing was sent to all non-respondents, followed by reminder post-cards two weeks later. The second mailing resulted in 39 additional responses, providing us with 208 responses from this phase (or 19.6%). For the total survey, the overall response rate from both research phases was 19.3%, yielding 284 useable responses. T-tests were performed to determine the appropriateness of pooling the data from the two phases (n=76 and n=208). No significant differences between the two samples were found on key variables including sales, total number of employees, and age of firm. For this study and consistent with the SBA definition

<sup>1</sup> Firms with less than 250 employees are considered small, in accordance with accepted government standards for small firms (*The State of Small Business*, 1995).

<sup>2</sup> Buckley and Brooke identified three technology sectors; primary, secondary and tertiary. Primary industries are considered to be environmental and agricultural businesses; secondary are food equipment and service organizations; tertiary are finance and service organizations.

<sup>3</sup> Associations included: primary sector- the Farm Equipment and Irrigation Associations; secondary sector- National Barbecue Association and National Poultry and Food Distributors Association; tertiary sector- National Association of Personal Financial Advisors.

of a small business, only those firms which had sales of \$50 million or less and 500 employees or less were included, giving us a sample size of 128 ( $n = 128$ ). Thus, the findings of the statistical analyses are generalizable to U.S. small businesses across primary, secondary, and tertiary industrial technology sectors.

The analysis sample was almost equally split between internationalized and non-internationalized firms and following our sample stratification; it was equally distributed across industrial technology sector. Overall, the firms were small (i.e., average sales volume of USD 4.5 million or less, average number of employees 34 or less), and old (i.e., average age over 18 years). All respondents were executives (founders/CEO's), with many performing more than one managerial function. Over ninety percent of the respondents owned 50 percent in their business or more, and almost one-quarter of the respondents were women. The decision-maker profile of the survey respondents gives reasonable confidence as to the external validity of the findings.

### **Measures**

#### **Internationalization Strategy**

Internationalization strategy is defined as the "foreign market servicing strategy of a firm" (Buckley, Pass, & Prescott, 1992). Following previous work, the degree of internationalization was chosen as the operationalization for internationalization strategy. To insure validity, respondents were asked a screening question to determine if they were engaged in international activities; "Are you engaged/not engaged in any of the following international activities, import, export, joint venture, license, joint venture?" Then, to assess degree of internationalization, two distinct measures, scope of internationalization and scale of internationalization were used. While other authors have measured degree as a single item measure, for conceptual clarity, this research employed two measures. The first measure scope of internationalization is similar to Bloodgood, Sapienza, and Almeida (1996) and captures the "extent" of value chain activity in internationalization. The second measure, scale of internationalization follows the more traditional measures of internationalization and includes percent foreign sales and number of markets served, which are also measures deemed to be appropriate for small firms (Reuber & Fisher, 1997).

Consistent with Vernon (1974) and McDougall (1989), scope of internationalization was used. Specifically, respondents were asked about the international location of customers, competitors, employees or facilities. This was combined with a measure of the firm's international sources (following Toyne, 1989) of raw materials, physical assets, product/service ideas, employees, and funding. The measures of international location and international sources were combined to arrive at an overall indicator, with scores from zero to nine, which represented the overall scope of internationalization of the firm.

Next, the scale of internationalization was measured using traditional measures from the international marketing literature (e.g., Cavusgil, 1984; Cavusgil & Naor, 1987). These included percent of international sales of overall sales of the company; percent of products sold internationally, and the number of countries served by the company. These three measures were self-reported (See Appendix).

#### **Resources**

Five resource types were measured (human, social, organizational, physical and financial) following previous work done by Greene, Brush and Brown (1997). A five point Likert scale was used ranging from *Highly Unfavorable* to *Highly Favorable* with a defined neutral

anchor. In all cases *Highly Favorable* was numerically coded at 5.0 while the *Highly Unfavorable* anchor was coded as 1.0 (i.e., large numbers denote greater favorability). Resource items were identified from previous sources (Chandler & Hanks, 1994) as well as conceptual work in entrepreneurship (Bruno & Tyebjee, 1982; Vesper, 1990). All multi-item scales were factor analyzed and checked for reliability (see Table 2). A correlation matrix reflects the means and standard deviations of the independent, dependent and control variables and shows the Cronbach's alpha for each multi-item scale (See Table 3).

**Table 2**  
**Confirmatory Factor and Reliability Analysis: Multi-Item Scales**

| <u>Resource Categories</u>       | <u>Factor Loadings</u> |
|----------------------------------|------------------------|
| <b>Human Resources</b>           |                        |
| Marketing Expertise              | .76                    |
| International Work Experience    | .68                    |
| International Business Education | .65                    |
| Explained Variance               | 74.0%                  |
| Eigenvalues                      | 2.22                   |
| Alpha                            | .82                    |
| <b>Organizational Resources</b>  |                        |
| Operating Efficiencies           | .88                    |
| Cost Structure                   | .85                    |
| Customer Service Capabilities    | .82                    |
| Unique Products/Services         | .80                    |
| Employee/International Exp       | .74                    |
| Multilingual Staff               | .72                    |
| Strategic Alliances              | .71                    |
| Explained Variance               | 65.2%                  |
| Eigenvalues                      | 4.40                   |
| Alpha                            | .91                    |
| <b>Financial Resources</b>       |                        |
| Access to Debt                   | .91                    |
| Access to Equity                 | .91                    |
| Domestic Profitability           | .71                    |
| Explained Variance               | 72.8%                  |
| Eigen Values                     | 2.16                   |
| Alpha                            | .81                    |

**Human Resources** - Following prior research, human resources comprise a broad range of aspects- the owner-founder's achieved attributes (Becker, 1964), background in family characteristics, education, and experience (Cooper, 1981), as well as attitudes, motivations and goals (Davidsson, 1989; Birley & Westhead, 1990).<sup>4</sup> Human resources were measured according to three achieved attributes: marketing expertise, international work experience and international education, which were found to be significant in previous research studying differences between exporters and non-exporters (Bilkey, 1978; Cavusgil & Naor, 1987).

<sup>4</sup> \* One item, expertise in technology, was dropped from the scale due to low factor loadings.

**Table 3a**  
**Mean, Standard Deviation for Each Scale**

| Variable                                  | Measure           | <u>M</u> | <u>SD</u> |
|---|-------------------|----------|-----------|
| 1. Scope international <sup>a</sup>       | Single objective  | 1.83     | 1.89      |
| 2. % International Sales                  | Single objective  | 8.86     | 18.39     |
| 3. % International Production             | Single objective  | 23.13    | 26.53     |
| 4. Number Markets                         | Single objective  | 11.31    | 11.40     |
| 5. Age                                    | Single objective  | 18.52    | 16.16     |
| 6. Sales (\$million)                      | Single objective  | 4.60     | 9.30      |
| 7. FTE                                    | Single objective  | 34.46    | 63.02     |
| 8. Human Resources <sup>b</sup>           | Scale             | 2.67     | 1.46      |
| 9. Financial Resources <sup>b</sup>       | Scale             | 2.42     | 1.49      |
| 10. Organizational Resources <sup>b</sup> | Scale             | 2.93     | 1.32      |
| 11. Social Resources <sup>b</sup>         | Single subjective | 2.98     | 1.78      |
| 12. Physical Resources <sup>b</sup>       | Single subjective | 3.65     | 1.56      |

**Table 3b**  
**Correlation Matrix for Each Scale**

|    | 1 | 2      | 3      | 4     | 5     | 6      | 7      | 8      | 9      | 10     | 11     | 12     |
|----|---|--------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| 1  | - | .40*** | .35**  | .33*  | .23** | .26**  | .44*** | .39*** | .34*** | .40*** | .38*** | .15    |
| 2  |   | --     | .82*** | .29*  | .01   | .04    | .04    | .33*** | .18*   | .18*   | .39*** | .13    |
| 3  |   |        | --     | .34** | -.19  | -.14   | -.07   | .38**  | -.20   | .07    | .19    | -.01   |
| 4  |   |        |        | --    | .32*  | .24    | .10    | .14    | -.04   | .11    | .18    | -.11   |
| 5  |   |        |        |       | --    | .39*** | .50*** | .00    | .13    | .16    | .07    | .01    |
| 6  |   |        |        |       |       | --     | .60*** | .15    | .21    | .23*   | .16    | .02    |
| 7  |   |        |        |       |       |        | --     | .18*   | .23**  | .28**  | .19*   | .11    |
| 8  |   |        |        |       |       |        |        | --     | .47*** | .75*** | .65*** | .54*** |
| 9  |   |        |        |       |       |        |        |        | --     | .60*** | .39*** | .46*** |
| 10 |   |        |        |       |       |        |        |        |        | --     | .57*** | .69*** |
| 11 |   |        |        |       |       |        |        |        |        |        | --     | .35*** |
| 12 |   |        |        |       |       |        |        |        |        |        |        | --     |

*Note: The higher value indicates a positive relationship*

<sup>a</sup> Measured on a 10-point scale, 0 = none, 9 = all international

<sup>b</sup> Measured on a 5-point scale, 1 = highly unfavorable, 5 = highly favorable

\* - significant at  $p \leq .05$ ; \*\* - significant at  $p \leq .01$ ; \*\*\* - significant at  $p \leq .001$

**Social Resources** - Social resources are defined as networks and alliances (Bordieu, 1983). In the international marketing literature, social resources, or personal contacts of the manager or founder are shown to motivate exporting (Cavusgil & Naor, 1987). Social resources of the respondent (which in this sample is the firm founder or owner) were operationalized using a single measure, personal networks and relationships.<sup>5</sup>

**Physical/Technology Resources** - Physical resources were represented by up-to-date equipment and technology (Hofer & Schendel, 1978). Similarly, a multi-item measure is preferred, but this was also a single item measure.

**Organization Resources** - Organizational resources include systems, policies, culture and the knowledge of the organization members (other than founders) as well as routines and structures (Tomer, 1987; Dollinger, 1995). Following this definition, procedures, expertise of staff, and firm routines and capabilities were measured using a seven-item scale.

**Financial Resources** - Financial resources, access to debt and equity (Bygrave, 1992), were measured using a three-item scale.

**Industrial Sector** - Industrial sector was measured as a categorical variable: coded as 1 (primary sector), 2 (secondary sector), and 3 (tertiary sector). Two dummy variables were created; Sector 1 and Sector 2, where Sector 1 = 1 if primary industry, 0 otherwise, and Sector 2 = 1 if secondary industry, 0 otherwise; with the tertiary industry serving as a referent point.

### **Firm Demographics**

**Firm Age** - The age of the firm was determined by subtracting the year in which the firm was founded from the survey year.

**Firm Size** - The size of the firm was determined by measuring the dollar sales volume and by the number of full time employees (FTE).

## **FINDINGS**

To test hypothesis 1, a multivariate analysis of variance (MANOVA) was run to determine if the resource profiles varied between internationalized and non-internationalized. Results in Table 4 show there were significant differences between internationalized and non-internationalized firms across all resource stocks. A series of univariate tests revealed that the social, organizational, financial, physical, and human resources of internationalized companies were significantly different than the resource stocks of non-internationalized companies. In all cases, the perceived favorability of all resource stocks was higher for internationalized companies. These results provide strong support for hypothesis one.

Hypothesis two was tested using hierarchical regression. Hierarchical regression is a technique by which the researcher first specifies the regression equation with a subset of the variables in the overall model, and then respecifies the equation a second time adding the additional variables of interest. This allows the researcher to test for the added significance of

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<sup>5</sup> While multi-item measures are preferred, there is precedent for single item measures in the Entrepreneurship area (Cooper & Gimeno-Gascon, 1992).

**Table 4**  
**Comparisons Between Internationalized and Non-internationalized Companies**

| Variable              | Non-Internationalized<br>(n = 55) |       | Internationalized<br>(n = 66) |       | Univariate<br>F-tests |
|-----------------------|-----------------------------------|-------|-------------------------------|-------|-----------------------|
|                       | M                                 | SD    | M                             | SD    |                       |
| Age                   | 14.50                             | 11.90 | 21.75                         | 18.53 | 8.26**                |
| Sales<br>(\$ Million) | 1.34                              | 3.52  | 7.36                          | 11.80 | 13.16***              |
| FTE                   | 17.26                             | 20.79 | 19.58                         | 24.76 | 14.52***              |
| Human Res.            | 2.05                              | 1.59  | 3.18                          | 1.14  | 17.21***‡             |
| Organization Res.     | 2.42                              | 1.57  | 3.41                          | .78   | 17.50***‡             |
| Financial Res.        | 1.70                              | 1.40  | 2.95                          | 1.31  | 22.72***‡             |
| Social Res.           | 2.04                              | 1.86  | 3.70                          | 1.32  | 28.39***‡             |
| Physical Res.         | 3.32                              | 1.98  | 3.95                          | 1.05  | 4.51*‡                |

\* - significant at  $p \leq .05$ ; \*\* - significant at  $p \leq .01$ ; \*\*\* - significant at  $p \leq .001$

‡ MANOVA summary for resources - Pillais  $F(1, 50) = 6.817^{***}$ ,  $r^2 = .35$ ; power = .99

the additional variables. As is consistent with the technique, the tests for this hypothesis were conducted in two stages. First, the regression was conducted without the effect of firm resources (see Table 5, Model 1). This model tested the predictive value of size, age and industrial sector alone on the dependent variable, small firm internationalization strategy. Next, the regression equations were run again with size, age and industrial sector as well as all five sets of firm resources (see Table 5, Model 2). This test determined the predictive effects of specific resource groups on the dependent variable, small firm internationalization strategy. We used four different measures of internationalization strategy. The predictor variables were regressed on each of the four measures of degree of internationalization: scope of internationalization, percent international sales, number of markets served, and percent products sold internationally. Results are presented in Table 5.

When comparing model one and model two using *scope of internationalization* as the dependent variable, there is little improvement in the explanatory model when resources are added, indicating that the addition of resources to the model does not significantly contribute to the model's overall predictive accuracy.

However, when comparing model one and model two using *scale of internationalization* as the dependent variable, there are significant changes when resources are included, indicating that the addition of resources to the equations does help to predict small firm internationalization. Specifically, when *scale of internationalization* is operationalized as percent of international sales, the overall model changes from insignificant to significant and human and social resources are significant at the  $p \leq .05$  level (See Table 5.) Interestingly, when *scale of internationalization* is operationalized as number of markets served, the partial F test shows there is no improvement in predictive accuracy when resources are added to the equation.

**Table 5**  
**Hierarchical Regression Estimates of Firm Demographics and Resources**  
**on Small Firm Internationalization Strategy <sup>a</sup>**

| BETA                        | Scope of Internationalization<br>(n = 128) |           | Scale of Internationalization            |         |   |         |   |         |
|-----------------------------|--|-----------|--|---------|---|---------|---|---------|
|                             |  |           | Percent International Sales<br>(n = 128) |         | Number of Markets Served <sup>a</sup><br>(n = 66) |         | Percent of Products Sold Internationally <sup>a</sup><br>(n = 66) |         |
|                             | Model 1                                    | Model 2   | Model 1                                  | Model 2 | Model 1   | Model 2 | Model 1   | Model 2 |
| Age                         | -.0832                                     | -.0656    | -.0777                                   | -.0270  | .2446   | .3126   | -.2538  | -.0760  |
| Sales                       | -.0095                                     | -.1290    | .0263                                    | -.0142  | .2854   | .3139   | -.1427  | -.1616  |
| FTE                         | .4196**                                    | .4448***  | 3.535E-05                                | -.0622  | -.1415  | -.1784  | .1106   | .0549   |
| Sector 1                    | .2707**                                    | .2266*    | .2242                                    | .2840*  | .2585   | .3084   | .2948   | .3337   |
| Sector 2                    | .1099                                      | .1213     | .1261                                    | .1865   | .0350   | .0510   | .2074   | .2818   |
| Hum.Res                     |  | .1712     |  | .2897*  |   | .3655   |   | .8236** |
| FinRes                      |  | .0509     |  | -.0512  |   | -.0722  |   | -.1525  |
| OrgRes                      |  | .1452     |  | -.2753  |   | -.0503  |   | -.4673  |
| SocRes                      |  | .1119     |  | .3356*  |   | .0412   |   | -.0225  |
| PhysRes                     |  | -.0939    |  | .1559   |   | .0261   |   | -.0325  |
| <b>REGRESSION FUNCTION:</b> |  |           |  |         |   |         |   |         |
| F                           | 6.8631***                                  | 6.5661*** | .7616                                    | 3.0151* | 2.1801†   | 1.6341  | .7163   | 2.3155* |
| Adj.R <sup>2</sup>          | .2046                                      | .3465     | .0106                                    | .1610   | .1182   | .1285   | .0000   | .2344   |
| Partial F                   |  | .4366     |  | .5814   |   | .8415   |   | 2.5421* |

<sup>a</sup> Internationalized companies only

† Significant at p ≤ .1; \* significant at p ≤ .05; \*\* significant at p ≤ .01; \*\*\* significant at p ≤ .001

Finally, when scale of internationalization is operationalized as percent of products sold internationally, the partial F test suggests significant improvement when resources are added to the model. In this case, model one is insignificant, but model two which includes resources is significant. In addition, the individual resource category human resources, is highly significant at the p ≤ .01 level.

## DISCUSSION AND IMPLICATIONS

Our objective was to examine the differences in resource profiles of internationalized and non-internationalized firms and then to assess whether internationalized firms have different sets of resources depending on their internationalization strategy. Following is a discussion of our three principal findings.

**Resource Profiles Differ Between Internationalized and Non-internationalized Small Firms.** Our expectation that resource profiles would vary between internationalized and non-internationalized firms was confirmed (See Table 4). All five types of resources- social, organizational, financial, physical and human resources differed significantly, and of these resource types, all except one (physical resources) were highly significant at the  $p \leq .001$  level. This supports Penrose's (1959, 1971) contention that the future expansion of a firm is influenced by the resource expectations of the owner/founder, as well as Greene and Brown (1997) who argue that the growth strategy of the firm will influence resource stocks.

The greatest differences between internationalized and non-internationalized firms were evident in stocks of social and financial resources. While early export marketing literature examined demographic characteristics of the founder, (e.g., foreign language capability, experience, education) (Miesenbock, 1988) our study found these human capital variables were less significant than social and financial resources. We interpret this to mean that for internationalized firms, the contacts and networks of the owner/founder, better known as his/her social capital as well as the owner/founder's access to financial resources, need to be relatively more favorable than achieved human capital attributes. The significance of the entrepreneur's social resources also suggests that international networking or boundary-spanning activities are important to develop if the company plans to internationalize. This finding supports network researchers' contention that leveraging networks is a particularly useful route to internationalization for small and medium sized enterprises (Axelsson & Johanson, 1992; McNaughton & Bell, 1999). It also supports Oviatt and McDougall (1999) who posit that in addition to human resources, it is the strength of the international networks or social capital in combination with the financial ability to leverage those networks, which are critical for small firm internationalization.

In addition, Oviatt and McDougall (1999) observe that the stage model of internationalization, is inadequate in that it only considers the influence of human resources on firm internationalization. They argue that with increased globalization, the logic of a human resources *only* predictor for small firm internationalization seems less persuasive, therefore other resource types, especially social networks and contacts, also must be considered. Similar to this logic, our research shows that both the international exposure of the owner/founder or of the top management team as well as their social and financial resources led to increased small firm internationalization.

For small firm owner/managers planning to internationalize a strong resource based is required. The decision to internationalization is clearly multi-faceted, and a successful internationalization strategy draws on more resources than just experience, education and personal knowledge. Therefore, owner/managers would be at a distinct disadvantage if the decision to internationalize was made solely based on their human resource stocks.

**Age, Size and Industry Effects** Although there are significant age and size differences between internationalized and non-internationalized firms (See Table 4), when we ran regression analyses across all four measures of internationalization strategy, results showed that size (measured by full time employees) and industry sector were significant only when internationalization was operationalized as *scope of internationalization* (see Table 5). In

addition, we found that adding resources to the model yielded no predictive improvement. This finding supports the stage model of internationalization which states that as firms grow in size and experience, they are more likely to internationalize (Johanson & Vahlne, 1977). Given that our measure of scope of internationalization included location of offices, employees, a range of sources of supply, customers, and ideas, it is reasonable to expect that larger sized companies would be more likely to have greater *scope of internationalization* (Leonidou, 1998). Furthermore, we expected that firm resources, especially organizational and social resources, also would be associated with scope of internationalization, but findings indicate that the addition of resources to the model failed to improve its overall predictability. This suggests that if a company plans to have international customers, offices, and sources of supply, sheer size (measured by number of employees) is of critical importance.

For managers of small firms, this finding may influence their choice of internationalization strategy. For example, if the small firm has not yet achieved a critical mass in terms of number of employees, however it still is interested in pursuing a strategy of internationalization, then owner/managers may want to consider licensing or developing agency-type relationships with other firms or individuals who could conduct the international portion of their business for them. Then, when critical mass is achieved, the small firm can reassess this decision, and move to a different mode of foreign entry, if appropriate.

**Resource Profiles Differ Depending On Internationalization Strategy** Although our results did not yield strong support for the effect of resources in explaining differences in internationalization strategy, resource profiles do vary when measured by percent products sold internationally and percent international sales (see Table 5). When firms sell a greater variety of products internationally, human resources, or the owner/founder achieved attributes (international work experience, marketing and international business experience) are significantly stronger.

This implies that the owner/founder may have a broader international perspective, derived from experience, which decreases the perceived risk of selling products abroad and/or results in greater knowledge of the likelihood of products selling in other countries. While this finding is related to work showing that international perspective or attitudes of the manager does distinguish between exporters and non-exporters (Bijmolt & Zwart, 1994), our measures of achieved attributes go beyond the idea of attitudes, suggesting that owner/founders of internationalized firms may have certain "international competencies". Given that entrepreneurial competencies are a composite of knowledge, skills and experience that lead to successful outcomes (Bird, 1995), it is reasonable to expect that the human resource types are important to selling more products abroad, and therefore, would be associated with particular international skills, experience, or competencies.

In aggregate, the results of this study suggest that for upstream value chain activities, such as the location and sources of supply, firm size is most important. Conversely, for downstream value chain activities, which involve distribution and sales activities, the human and social resources of the founder are more important than firm demographics. It is possible that this reflects the depth of international commitment by a firm. It seems quite likely that firms that are newer globalizers are more likely to distribute and sell their existing products abroad, to new markets (Vernon, 1974). However, when a firm has more internationalization experience, or alternatively is larger and therefore may have a wider product line, then using international sources of supply may make more sense. Therefore, depending on the type of value chain activity, our findings confirm that internationalized firms have different resource profiles.

## FUTURE RESEARCH

There are a number of possible extensions to this research. First, expanded measures of financial, social, physical and technical resources should be utilized. For example, our measure of financial capital included perceived access to debt, equity and favorable domestic profits - however; the actual capital structure of firms (i.e., size of bank loans, venture capital infusions and dollar profits) might yield a more extensive picture of the importance of financial resources to the internationalization effort. The same is true for social resources, which was measured using a single item. Expanded measures of networks, types of contacts, frequency, location and characteristics of the relationships would provide more detail on the effects of social resources in internationalization strategy. Importantly, a follow-up survey would add longitudinal depth.

Second, the impact of internationalization strategy and resources on competitive advantage and subsequent firm performance are important questions that remain un-addressed. For example, the extent to which resource combinations, which for small firms yield a unique advantage domestically, are transferable to larger international markets is another empirical question (Hymer, 1976 [1960]) left for future empirical exploration.

In addition, our study only looked at small firms located in the United States. Therefore, our findings are only generalizable to this population of small firms. Additional research using a sample derived from an international population would both enhance the generalizability of the findings and add a much-desired comparative element to the study.

## CONCLUSIONS

This study examined the differences in resource profiles between internationalized and non-internationalized small firms. There are three main findings:

- Resource profiles differ between internationalized and non-internationalized small firms. All five types of resources - social, organizational, financial, physical and human resources differed significantly, with the greatest difference being social and financial resources.
- Although there are significant age and size differences between internationalized and non-internationalized firms, results showed that size (measured by full time employees) and industry sector were significant only when internationalization was operationalized as scope of internationalization.
- Resource profiles differ based on percent products sold internationally and percent international sales. When firms sell a greater variety of products internationally, human resources, or the owner/founder achieved attributes (international work experience, marketing and international business experience) are significantly stronger.

This article builds on previous research from the stage theory of internationalization, and on the theory of new venture internationalization first proposed by McDougall, Shane and Oviatt (1994). It adds to previous work by examining specific resources and their link to small firm internationalization (Naidu & Prasad 1994; Bloodgood, Sapienza & Almeida, 1996; Leonidou 1998; Reuber & Fisher, 1998).

There are important implications for managers seeking to pursue an internationalization strategy. Our findings suggest that if managers plan to internationalize, they should assess

their resource base and develop a strategy for building or acquiring social, financial and organizational resources in addition to their own human resources. For managers interested in internationalizing in multiple markets, larger and more established firms have greater likelihood of success. Conversely, for managers with a focused strategy, or for smaller firms, solid human, social and financial resources are essential for success.

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### Appendix: Questionnaire Items

#### Scope of Internationalization

1. Please, indicate the location and sources of the following for your business  
(sum of nine binary item scores, scale range = 0 (none international) to 9 (all international))

| Location           | Domestic | International | Sources of ...        | Domestic | International |
|--------------------|----------|---------------|-----------------------|----------|---------------|
| Customers          |          |               | Raw materials         |          |               |
| Competitors        |          |               | Physical assets       |          |               |
| Employees          |          |               | Product/service ideas |          |               |
| Facilities/offices |          |               | Employees             |          |               |
|                    |          |               | Financing             |          |               |

#### Scale of Internationalization (self reported)

- Percent international sales
- Number countries/markets served
- Number products sold abroad

#### Resources

1. Please rate the favorability or unfavorability of the following dimensions for your success in the global marketplace – Likert scale = 1 (highly unfavorable) to 5 (highly favorable)

|  |  |
|--|--|
| <b>Human resources</b>                         |  |
| International work experience                  | International business education   |
| Marketing experience                           | Expertise in technology and communications<br>(eliminated due to low factor loading) |
| <b>Organizational resources</b>                |  |
| Operating efficiencies                         | Cost structure   |
| Customer service capabilities                  | Unique products/services   |
| Multilingual staff                             | Employees with international experience  |
| Strategic Alliances and Linkages               |  |
| <b>Financial resources</b>                     |  |
| Access to debt financing                       | Access to equity financing   |
| Domestic profitability                         |  |
| <b>Social resources</b>                        |  |
| Personal networks and relationships abroad     |  |
| <b>Physical resources</b>                      |  |
| Up-to-date equipment and computer technologies |  |