



Industry
Canada

Industrie
Canada

Management Competencies and SME Performance Criteria: A Pilot Study

December 2003



**Small Business Policy Branch
Industry Canada**

Canada

For a print copy of this publication, please contact:

Publishing and Depository Services
Public Works and Government Services Canada
Ottawa ON K1A 0S5

Tel. (toll-free): 1 800 635-7943 (Canada and U.S.)
Tel. (local): (613) 941-5995
TTY: 1 800 465-7735
Fax (toll-free): 1 800 565-7757 (Canada and U.S.)
Fax (local): (613) 954-5779
Email: publications@pwgsc.gc.ca

This publication is available upon request in accessible formats. Contact:

Multimedia and Editorial Services Section
Communications and Marketing Branch
Industry Canada
Room 264D, West Tower
235 Queen Street
Ottawa ON K1A 0H5

Tel.: (613) 948-1554
Fax: (613) 947-7155
Email: multimedia.production@ic.gc.ca

This publication is also available electronically on the World Wide Web in HTML format at the following address: <http://strategis.ic.gc.ca/epic/internet/insbrp-rppe.nsf/en/rd00850e.html>

Permission to Reproduce

Except as otherwise specifically noted, the information in this publication may be reproduced, in part or in whole and by any means, without charge or further permission from Industry Canada, provided that due diligence is exercised in ensuring the accuracy of the information reproduced; that Industry Canada is identified as the source institution; and that the reproduction is not represented as an official version of the information reproduced, nor as having been made in affiliation with, or with the endorsement of, Industry Canada.

For permission to reproduce the information in this publication for commercial redistribution, please email: copyright.droitdauteur@pwgsc.gc.ca

Cat. No. lu188-11/2006E-PDF
ISBN 0-662-43164-2
54361E

Aussi offert en français sous le titre : *Compétences en gestion et critères de rendement des PME : étude pilote*

Management Competencies and SME Performance Criteria: A Pilot Study

Executive Summary

This pilot study reports on two relatively unexplored aspects of firm performance: the roles of management competencies and owners' perceptions about success. The research is a pilot test of a Management Competency Index (figure 1), a diagnostic tool that seeks to measure the nature and diversity of managerial skills and knowledge of owners of small- and medium-sized enterprises (SMEs). The specific research objectives are:

- to measure the extent to which a sample of Western Canadian business owners have undertaken a series of specific managerial tasks;
- to investigate the associations between management competencies and owners' success criteria, growth intentions, growth strategies, and management experience; and,
- To investigate the relationships of these items to attributes of the firms and the owners of the firms.

This is the first empirical study that explores linkages among business owners' management skills, perceptions of success, and firm performance while also controlling for moderating variables including growth intention, age of owner, sector, age of firm, gender of owner and previous participation in business-related training. At the same time, this is also a pilot study, one that relies on a sample that is not fully representative of the population of Canadian SMEs. The report points the way to future, confirmatory research and identifies potential future directions in that respect.

Methodology

The sample frame employed in this work was drawn from previous research conducted on behalf of the Women's Enterprise Initiative (WEI) Research Committee in 2002 (Orser and Riding, 2002). This sampling frame comprised 1,002 respondents to the 2002 WEI survey and was drawn from commercial databases. The original WEI telephone survey was conducted during winter of 2002. For this work, the 1,002 respondents to the WEI survey were surveyed again, in June 2003. A total of 326 telephone surveys were completed representing a 46.2% response rate of eligible respondents and a 32.6 percent response rate from among the sampling frame.

Owners' Growth Intentions

Forty-two percent of the 326 respondents reported that they were seeking expansion of their firms during the next two years. The balance reported that they did not intend to expand. Overall, owners' views appear stationary across the 1999-2002 survey periods. Growth intention was also associated with subsequent firm growth. Firms whose owners had voiced an intention to expand in the Winter 2002 WEI survey displayed substantially higher levels of revenue growth than did firms whose owners had not sought growth.

Firm growth was found to be directly associated with diversity of management experience and owners' growth intentions. These two factors underlie all other owner and firm attributes that have historically been associated with firm growth.

Success Criteria

In general, business owners identify customer relations, maintaining personal relationships, and product or service quality as the most important success attributes. Financial criteria such as profitability and income generation are not as highly rated. Hence, commercial (versus personal) performance criteria appear to predominate as owners' success criteria.

Significant differences were observed between employers and non-employer businesses: employers were relatively more concerned with generating income, profitability and operating performance than non-employers. These differences are reflected in the importance of both commercial (e.g., the firm's operating performance) as well as personal (e.g., personal goods acquisition) outcomes.

Further investigation found that "success" appears to be a multi-dimensional concept that reflects four underlying dimensions or factors:

- *market acceptance*, outcomes that are inherently extrinsic to the business owner and commercial in nature.
- *self-fulfillment*, intangible aspects of success that include criteria such as spiritual well-being, and pursuit of intellectual activities.
- *personal welfare*, factors that embrace criteria that are personal and largely extrinsic to the business owners.
- *financial performance* such as personal goods acquisition, profitability, generating income, and the firm's operating performance.

While different business owners rank different dimensions as primary, each of these dimensions holds some degree of importance to all business owners. That is, for all owners, success is comprised of all four of these dimensions but these are weighted differently from business owner to business owner. These results suggest that small business training programs must address issues related to owners' personal welfare. It is

not sufficient to focus exclusively on commercial and technical aspects of small business management, as many training initiatives do.

Management Competencies

To investigate the role and importance of management competencies, two categories of information were sought on the survey:

- *Depth of experience* was measured by the number of years of business management experience in the current firm and by the total years of management experience;
- *Breadth of experience* was measured by owners' self-ratings of their abilities and experience on each of 25 activities that are typically undertaken by SME owners. These include: supplier client relationships; small business management; pricing; personal career management; operations management; small business regulation; project management; delegating; personal time management; professional networks; business plans; promotion and advertising; new product development; on-line communication; financial reporting; software skills; industry standards; using market research; accessing files of knowledge; sources of capital; financial analysis; accessing industry information; adopting new technology; and, electronic commerce.

On average, respondents brought 2 decades (19.4 years) of total experience to their firms of which, on average, 13.5 years was within their current firms. Male respondents brought significantly more years of management experience than their female counterparts (21.5 years versus 14.8 years, respectively). On average, male respondents had 14.8 years of current firm experience compared to female respondents with 10.4 years of experience in the firm. Compared to male business owners, women also were found to have significantly lower self-ratings of competence with respect to sourcing capital and with analysing financial results, but report significantly greater competency with respect to promotion and advertising.

Employers had significantly more experience in small business and operations management, human resources (e.g., delegating, people management) and accessing industry information including using market research and adopting new technology. Non-employers believe they have more experience in personal career management.

The findings also reveal that a surprisingly high proportion of business owners consider management activities such as adopting new technology, electronic commerce, and using such external sources information as market research, financial analysis, and industry information as “not applicable”. This finding should be of significant concern to policy makers given that firm growth and survival are consistently associated with innovation. Within the sample, a majority of non-employer business owners and one-third of employer firms perceive innovation-related activities (e.g., electronic commerce, adopting new technology, accessing industry information) as “not applicable” to their firms.

The above results indicate that many business owners appear to have different priorities and are comfortable operating in traditional ways. These results suggest that a key challenge to policy makers is to assist business owners gain a better understanding about how innovation, adoption of technology, and acquisition of technology-based skills are applicable to firm performance and longevity.

Growth Strategies

To investigate growth strategies, those respondents who had indicated their intention to expand the size or scope of the business were asked to rate the importance of each of a set of 14 strategic approaches to generating growth. Improving existing products and services, upgrading operations and adding a new product or service were ranked “most important”. The majority of owners focus on domestic markets: the least important growth strategy of both employer and non-employer firms was “seeking new international markets”. It is also interesting to note that “assistance from government agencies” was a low priority of the business owners.

Several statistically significant differences between employer and non-employer firms were noted. Non-employers rated seeking new domestic markets and expanding advertising as significantly higher while respondents of employer firms view hiring new employees as an important growth strategy.

Further investigation of the underlying patterns in the growth strategies suggests three underlying growth alternatives:

- *upgrading of resources*, strategies that include seeking financing and professional advice, assistance from government agencies and programs, adding new equipment or operating space, upgrading operations, and hiring additional employees.
- *product development* including improving existing products or services, adding a new product or service, employing additional technology or computer systems, improving one’s business management skills, and seeking new domestic markets.
- *market development* strategies such as seeking new international markets, selling over the Internet, and expanding advertising and promotion.

The strategy associated with the highest levels of revenue growth over the 4-year 1999 to 2002 period is upgrading resources (might be referred to as improving factors of production). The results suggest that among those business owners who intend to grow the business, most pursue multiple growth strategies because growth entails both physical improvements (e.g., equipment) and improvements in knowledge and skills.

From the perspective of national policy, the results also suggest a need to emphasize the importance of market development. In particular, exporting and selling on the Internet do not appear to be employed to their full potential. These activities might be further encouraged and supported as economic development opportunities.

Linking Performance and Managerial Competencies

The theoretical model that underlies this study posits that the success factors associated with business ownership are a composite of pecuniary and non-pecuniary factors and that firm performance reflects owner and firm attributes. Empirically, firm performance was indeed found to be a multi-dimensional concept. Therefore, a multivariate statistical framework was employed to examine the linkages among perceptions of success, management competency measures, and firm performance. The vector of dependent variables included owners' self-scored achievement with respect to market acceptance, self-fulfillment, personal welfare, and financial performance as well as the four-year change in annual revenues. Independent potential causal variables included various measures of depth and breadth of management competency. Control variables included "tombstone" data about firms (for example, age of owner, sectoral dummy variables, age of firm, gender of owner, and previous participation in business-related training), and the factor variable was owners' growth intentions.

The results confirmed that the two groups of firms (those whose owners seek growth, those whose owners do not seek growth) differ significantly in terms of their performance after taking into account the other independent variables. In particular, revenue growth is found to be significantly associated with intention to grow. The analysis indicates that the five dimensions of performance/success also differ significantly across the growth intention factor and are related to specific management competencies.

- Success with respect to market acceptance has a statistically significant association with: general management skills; network management skills, and personal welfare management skills.
- Success with respect to self-fulfillment has a statistically significant association with: general management skills and network management skills.
- Success with respect to personal welfare has a statistically significant association with general management skills, network management skills, personal welfare management skills and intention to grow.
- Success with respect to financial performance has a statistically significant association with: general management skills, HR management skills, network management skills, and, personal welfare management skills.

Further analysis revealed that growth in revenues was significantly correlated with the diversity, or breadth, of management skills and with the owners' intentions to pursue growth. Revenue growth was inversely correlated with the importance owners accorded to the self-fulfillment success criterion. This makes sense if owners who prioritize intellectual activities, spiritual well being, maintaining professional autonomy and community relations are significantly less likely to grow their firms. No single specific management competency (e.g., financial competency, marketing, etc.) was found to be associated with growth. Rather, growth appears to be a consequence of the interaction of multiple management activities (and the diversity of management experience that results) as well as the owners' determination that their firms would grow.

Conclusions and Recommendations

The findings of this pilot study provide important new insights into the growth of Canadian small firms and the importance of the non-financial aspects of firm performance. These findings suggest that the primary factors driving firm growth are owner's growth intentions and diversity of managerial ability. Study recommendations include:

- The need to continue communicating to business owners the relevance of those management activities associated with innovation (e.g., electronic commerce, accessing industry information and adopting new technology).
- The relative lack of operations management experience among business owners suggests a need for skill development as this area of management is sometimes overlooked in training programs. These management activities are particularly important given the study finding that those business owners that emphasize the upgrading of resources (an operational strategy) benefit from the largest change in annual revenues over the 4-year study period.
- To develop further owners' finance skills and competencies, Industry Canada should continue to work with organizations such as The Canadian Bankers Association to develop training resources focused on finance skills and competencies. Small business training advisors might also benefit from further training in this area.
- Women business owners may benefit from being made aware of the significant differences in management experience from their male counterparts. Hence, reporting about the importance of management competencies should include benchmarks to compare levels of experience by gender.
- Training programs and funding that focus exclusively on innovation and technology, without consideration of the psychological aspects of firm ownership, negate important drivers of firm growth. For example, training programs could provide owners with opportunities to explore their motives of firm ownership and a better understanding of the consequences of not seeking growth (e.g., cost of capital, lower survivorship rates, lack of market acceptance). Such programs might usefully address the personal sacrifices that business owners perceive as being associated with firm growth.

Finally, the Management Competency Index employed in this study appears to be a reliable composite measure of the diversity of owner's management experience. However, the study is a pilot study and several limitations must be noted. First, the sample used here differs from the population of Canadian SMEs in the following respects:

- The firms in the sample have survived sufficiently long to be listed in commercial databases and are therefore somewhat more mature than average and relatively fewer young firms and start-ups are represented. Early-stage firms, therefore, are considerably under-represented. While this is to be expected, it also introduces an important sampling bias that must be

recognized in interpreting the results of the work: early-stage businesses would form an important segment of the target audience for policy measures.

- The sectoral distribution is heavily weighted towards firms in the retail and wholesale sectors, reflecting the original intention of the sampling frame in the earlier WEI survey.

Second, the timeframe employed in this study was too short to measure reliably the linkages among the key variables and growth in employment. Changes in employment among the firms sampled were small across the four-year period employed. Changes in sales revenue was therefore used as a growth measure.

Third, the work did not consider other intermediate outcomes of managerial competencies such as the ability to secure financing. Future work might consider exploring managerial competencies and financing outcomes.

In view of these limitations, it would be premature to advance policy recommendations without further confirmatory analysis. Therefore, several recommendations are advanced in this regard. First, in any future work, the 25 variables used to assess managerial competencies should not be reduced to a smaller set. This recommendation reflects the finding that breadth, or diversity, of management experience appears to be a better indicator of firm performance than competencies within specific areas of management. As a result, future large-scale surveys might be lengthy, especially where tombstone data also need to be collected.

Two potential directions for future work are advanced for the purposes of discussion. One approach is to investigate the linkages among the key variables identified here and other, alternative, performance outcomes. One possibility in this direction is to re-sample respondents to the Financial Data Initiative baseline surveys to investigate the extent to which management competencies are related to such outcomes as loan turndowns or the ability to acquire venture capital. This approach has the advantage that the FDI has already collected tombstone data as well as information about financing outcomes. Potential validation might be obtained with relatively little incremental data collection.

A second approach is a large-scale survey. This approach requires particularly careful design of a survey instrument to ensure reasonable length and reliable coverage of business success outcomes.

In conclusion, the research team is confident that follow-up research built around these preliminary findings will substantially contribute to our understanding of, and ability to support, the growth of small businesses in Canada. The results of this unique research study provide evidence to suggest the need to focus further on the economic, social, and psychological aspects of firm ownership. As such it is hoped that this pilot study has provided useful guidance and direction.

Figure 1: Managerial Competency Index (Orser, 1997, 2000)

