

Learning about leadership and firm growth through monthly data collection and dialogue with entrepreneurs

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Abstract Academics often are criticized for doing research that is irrelevant and esoteric. Additionally, the review cycle is lengthy, and even when high quality research is produced, results are unlikely to reach the practitioner for years. Thus, in order to address the needs of both scientists and practitioners, a monthly survey of entrepreneurs was begun. Although the research study topic is how firms grow, the focus of this paper is on the research method used to understand the subject. The paper will lay out the logic for the monthly research process, explain the outcomes of the system, and provide the reader with some early and tentative findings from the ongoing work on how firms grow.

Keywords Entrepreneurship · Leadership · Research methods · Qualitative data · Agility

Agile research?

How do we, as academics, learn and do research? If you asked a group of practitioners, the answers would be something like “slowly and carefully.” You certainly would not hear a lot of people talk about our research methods as being “fast or speedy.” However, the world in which we, the teachers and researchers, do business is not slow; it is very fast. And successful firms are not only fast, but they are agile. According to Ray Gehani (1995, p. 20): “The speed at which an organization can respond to externally stimulated requirements determines its competitive survival and growth... Thus, the speed or time intervals within which an organization can innovate or convert its manufacturing line from one product to another product, or commercially launch a new product... become significant determinants of the organization’s agility.”

Learning is the output of our research; thus if we can speed up the process of doing research, we also should become more agile, better able to survive, and equipped to grow. Therefore, the project described in this paper is a direct effort to make the research

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process more agile, faster, and more responsive to the learning needs of executives. In many ways, it is an experiment in research and in learning. It is an experiment because many aspects of this study (at least as far as I have been able to ascertain) have not been done to date. Below is a summary of some of the research techniques used in this study of leadership:

- A monthly survey is sent out to a broad sample of leaders. As of April, 2004, about 50,000 executives around the world were being targeted for the survey.
- Each and every time a survey is conducted, the results are shared with all people in the sample (not just the respondents).
- An executive summary of the data also is shared with everyone.
- Respondents were asked to contribute questions to the survey, and some of the questions are included in each of the surveys.
- Respondents receive their own personal reports showing them their own responses vs. the overall sample results and scores grouped by industry.
- Any company can elect to have up to 50 of their leaders participate and then receive a report that shows their own company's scores compared to the overall results (sorted by industry, thus providing benchmark data). This is at no cost to the respondent.
- Questions change as issues change in the environment.
- Certain questions continue to be asked in order to provide trended results.
- The study relies heavily on open-ended comment data, and auto categorization technology (built into the technology being used) is employed for analysis of select questions.
- The survey used is always short; a maximum of 15 questions are asked each month.
- After each survey a press release is done to share key results, and monthly practitioner articles are published with the findings. This facilitates fast dissemination of results to an even larger audience.

This paper is a research methods paper that uses early survey results to demonstrate how the research process can be used as a new method. Although the data used for the study are interesting in their own right, it is important to note that the findings are still at an early stage of work. Therefore, strong conclusions about the research outcomes cannot be made, although it is my goal that conclusions about the research process help inform scientists and researchers who work in the field of entrepreneurship. Also, to be clear, this paper does not claim that the research method employed is necessarily "better" than more traditional approaches. Instead, my goal is to demonstrate that with the introduction of new technology to collect data, unique methods for collecting data and engaging survey participants are possible that had not been available to us in the past. Thus, by approaching the topic as an examination of a new research method, I hope that further discussion of the pros and cons of all of our various methods of collecting direct data from survey respondents can be spurred.

The agile article

Rather than follow our standard protocol and transition to the theory and then methods sections, in an attempt to be an example of agility, I am slightly altering the way in which the data are presented. The next section reviews the relevant survey results, collected in March, 2004.

By way of an introduction, the overall findings from June, 2003 (when the study started) through March, 2004 show that leaders are losing confidence, expect lower sales growth in

Q2 of 2004, and are not feeling energized by their own work. The comments collected in March were requested in an effort to understand this situation.

An entrepreneur energy crisis?

Entrepreneurs often are characterized as upbeat and energized; they are the people who motivate others. What happens if small business leaders start losing confidence or become de-energized themselves? The outcomes can be very negative for business growth, economic growth, and for entrepreneurial success. Thus, having over 500 executives write comment after comment about their own burnout and lack of energy is real-time learning that should be of concern to the academic community.

Below you will find comments from executives in firms with 100 or less employees. These individuals were asked to respond to the numbers that show low energy, decreased growth, and lower confidence scores.

Sample comments

“There is a need to produce at an increasingly higher level without the appropriate increase in resources. This is primarily due to world tensions that limit commitment from within companies to expand.”

“The past several years have been stressful for leaders who have seen their teams diminish in size and businesses suffer. Leaders are going to be cautious and careful rather than bold and energetic until momentum builds over a period of time.”

“You feel less energetic and less productive when you are battling uphill.”

“Business exhaustion; weariness. Leaders get worn down when they hit the “failure wall” too many times. Energy levels are higher when we are on the street looking for business or mergers. Then leaders get caught in the drudgery of producing, burn out slightly, and go on to new challenges, with higher energy levels.”

“I think that the current economic/political/world situation is having an impact on the entire business community. Uncertainty can set up a ‘negative energy field’ that can be difficult to overcome.”

“This effect may be the result of longer hours, larger workloads, and lower employment levels.”

“Personnel are taking on additional loads and levels of responsibilities. Working at those levels over an extended period of time will drain energy levels.”

“The world and national stages are filled daily with stories of dangerous, threatening behavior by our leaders and their enemies. It is enough to take the stuffing out of even the most weather-hardened veterans. The economic issues of recession and jobless recovery are particularly troubling and little leadership is being demonstrated by any visible player in solving these problems. Instead, billions are being spent on a police action in Iraq. How long can we sustain this?”

“Leaders like change, and moving forward. And leaders know what it takes to move forward. With overly conservative trends towards status quo, and multiple paths distracting many from the optimal path, it takes more upfront time, and more time spent on what should be obvious, to currently effect change. Just when we should be cutting costs by moving forward, many don’t want to move forward, or waste too much time on lesser quality products which costs management more time and resources. Nonproductive time drains leadership energy faster than anything.”

“Personally, I’ve been fighting to keep this business going for three bad years, and I’m burned out, out of energy, wiped out. But the business is going better.”

“I’m suffering from depression, which often affects my energy level. I find that the lower the energy, the more likely I am to make mistakes. Sadly, this tends to make the depression deepen.”

“We are all doing more with less. We are tired.”

“I think all business leaders are worried about the state of affairs in the world. We don’t feel confident in our political leaders and we do not feel safe in our country or the world. The government has taken a position that we are the greatest country and that no one else’s views should be respected and because of that the people who think we should try to work things out globally are feeling completely alienated from the government. This translates into stress in their jobs and businesses.”

“Seems like many revenue-generating efforts are failing. Executives just aren’t buying yet. With all the energy CEOs put into energizing themselves, their employees, and their markets (prospects), it just isn’t paying off yet. The market is still soft!”

“I can safely state that the executives are getting worn down from all the hype of an economic/manufacturing recovery (i.e., the jobless one!) that really hasn’t trickled down to improve our enthusiasm and outlook for a bright future!”

This small list of comments is representative of over 560 comments received in March, 2004. The total comments were coded, and results show that 45% of the executives said they were burned out, tired, could not focus, were suffering from lack of work-life balance, or were frustrated because their strategies were not working. Another 38% said they were not doing well because the economy was not improving, global news was negative, and these factors are affecting their productivity and the overall output of their workforce. Basically, 83% of the respondents agreed that something was wrong, and they went on to explain their own personal reasons why they were de-energized or losing confidence. And those comments came from entrepreneurs and small business owners as well as from leaders in larger firms.

Learning from real-time data

The reason I added the qualitative data about the leadership energy findings was to demonstrate what can be done with “agile” research. The ability we have today to use technology not only to collect data but to disseminate that information to a broad audience with the purpose of solving problems is incredibly high.

Thompson et al. (2003) discuss the advantages of doing web-based surveys rather than paper-and-pencil surveys. In their study they evaluate employee responses to the survey process, but they do not talk about the effects of getting real-time data to managers. The real advantage of using new technology to run surveys is for the researchers (or the managers) to get data faster so that they can do something with it. In the world of academia, we have the potential to learn from our data and quickly help solve today’s problems.

The ability to respond to key issues is one of the primary learnings from the research study that I will describe in this paper. For example, as a result of the energy comments being quickly collected, analyzed, and shared several articles were written and published in April, and both HR executives and coaches started responding by helping their leaders in April, 2004. Several executives have written back saying that after reviewing their results, they felt relieved simply knowing that they were not alone. This type of cycling of survey data, results, learning, and feedback holds much promise for our ability to be agile researchers and teachers.

Back to basics: Introduction to the leadership research study

In June, 2003, I began what was intended to be a monthly study of leaders around the world. The goal of the work was to do three things:

- (1) Trend resource growth and leadership confidence (variables from two theoretical streams of research),
- (2) Learn from leaders by asking questions about current issues facing them and their organizations, and
- (3) Experiment with a new process of doing research that engages the participants.

For the purposes of this paper (given space limitations, etc.), the next section focuses on the resource movement trends from June, 2003 to March, 2004. After reviewing this data, in the discussion, I will revisit the energy findings and briefly explain how the leader energy results may be associated with the resource movement discoveries.

Resource movement

One goal of the study was to consider the way that organizations grow, in particular, to focus on growth strategies as firms move out of the economic slump (assuming that economics would improve in late 2003–2004). Although several life cycle theories have been proposed and tested (e.g. Quinn and Cameron, 1983; Kazanjian and Drazin, 1989, 1990; Dodge et al. 1994), there continues to be little knowledge about the details of how firms grow or what resources they grow when in order to succeed. We know the stages many firms go through to grow, but we know less about the pace of growth or how firms move through each life cycle stage (Johnson and Bishop, 2002).

Thus, this study uses a resource-based view of the firm (Barney, 1991, 1995) to explore the growth of five resources: customers, sales, number of employees, products/services, and net profit. Those five resources were selected based on an analysis of the theoretical underpinnings of the resource-based view, a particular interest in focusing on how firms grow or reduce the employee resource, and by interviewing senior executives in order to develop a short list of resources that they would perceive as important (thus increasing the chances of the sample responding to frequent surveys).

The resource-based view of the firm has been successfully applied to the topic of human resource management by a number of authors (e.g. Wright et al., 1994; Barney and Wright, 1997). In most cases, authors address the degree to which human resource practices can provide a firm with competitive advantage by creating resources that are valuable, imperfectly imitable, and rare (Barney, 1991; Wright et al., 2001).

However, in this study, I argue that the equation is even simpler. When the economy is growing, firms that hire employees sooner will outperform their peers because they build the internal strength that will allow them to take advantage of the new opportunities created by overall economic recovery. In other words, employees provide a firm with the potential for internal competitive advantage, but they also are the mechanism for reaching out to the external business environment and understanding what new opportunities exist (Marchington et al., 2003).

This point may seem trivial, but consider the numerous layoffs that are occurring, and reflect on the comments that were provided in the earlier section on leader energy. To date, our economic recovery (at least in the United States) has been considered a “job-less one.” Firms that grow sales, add new customers, deliver new products, and improve their net profit without adding adequate human resources are less likely to sustain growth because the leaders and employees will be so focused on handling the day-to-day work that they will not have time to pursue new growth opportunities. Thus, the hypotheses to be tested states:

Hypothesis 1: Higher performing firms grow the employee resource at a faster rate than do lower employee firms.

Hypothesis 2: Higher performing firms grow the employee resource at a faster pace earlier in the growth cycle, when compared to lower performing firms.

Research methods

The study utilizes a sample of executives ranging from CEOs, VPs, and Directors to senior level professionals and consultants. The sample was created through the combination of a number of different data bases. First, I included a sample of alumni from the executive education programs at the Ross School of Business, University of Michigan. Second, I added samples from data bases that were purchased from a marketing company. The market research company collects contact information from individuals who attend professional conferences and from publicly available data bases. The data bases that were added to the study include: (1) Fortune 1000 executives, (2) NASDAQ executives, (3) general global sample of business executives, and (4) a sample of women business owners.

The original data base (from the marketing company) had approximately 70,000 names. Some of the e-mail addresses were not for an individual person but for info@ or service@ (general e-mail addresses). Thus, the first step in the survey process involved cleaning the data base to obtain useable e-mail addresses. After cleaning the data, the first survey went out to about 60,000 people. Then the second “cleaning” occurred. Many of the e-mails were unusable and “bounced back” (e-mail addresses may have changed, or the individuals may have changed jobs). Second, many people chose to “opt out” of the survey. After sending surveys out for a few months, the sample seems to be fairly stable (not many people are opting out now). We sent the survey out in March to about 47,000 e-mail addresses, but we anticipate that they are reaching at most 20,000 people.

However, we do not know how many people are really receiving the message and how many messages (invitations to take the survey) are being deleted via a corporate spam blocker or individual spam detectors. We do know that each month about 200 new people take the survey. Thus, slowly people are deciding to “opt into” the survey process. Recall that in addition to sending out surveys, when the survey closes, we share results. Our hope is that people will review the results and then choose to complete the survey at some later time.

To date, from this large sample of potential survey respondents, the number of people who have responded and for whom we have multiple types of demographic data is 3,677. The monthly survey respondent number ranges from about 560 to 970. The response rate varies based on the number of reminders sent; if the data look representative at the 500 level, we are trying not to send another reminder (we are concerned that too many reminders will cause people to opt out of the process). We did not set expectations that everyone needed to answer monthly but that people would answer when they have time, and the goal was to have a representative sample.

Sample

The sample was divided into small and medium size enterprises (SME) using self report data on number of employees and using the less than or equal to 500 employee definition. Using this definition, 2,589 firms were SMEs, and 1,185 were coded as larger firms. In terms of

Table 1 Sample demographics (All of these demographics are self reported by the respondents)

| Functional area distribution | | |
|---|-----------------|------------------|
| Functional area | Number reported | Percent of total |
| General management | 1,047 | 28.4 |
| Finance/accounting | 169 | 4.6 |
| Sales | 279 | 7.6 |
| Marketing | 297 | 8.1 |
| Public relations | 21 | .6 |
| Human resource management | 1,103 | 29.9 |
| Information technology | 206 | 5.6 |
| Research and development (other than IT) | 109 | 3.0 |
| Manufacturing | 71 | 1.9 |
| Engineering | 113 | 3.1 |
| General administration | 83 | 2.3 |
| Other | 186 | 5.0 |
| Total | 3,684 | 100.0 |
| Job level | Number reported | Percent of total |
| C-core (CEO, CFO, etc.) | 1,525 | 41.3 |
| VP level | 737 | 20.0 |
| Director | 546 | 17.8 |
| Senior manager | 306 | 8.3 |
| Manager | 354 | 9.6 |
| Professional, non-management | 165 | 4.5 |
| External consultant | 51 | 1.4 |
| Educator | 8 | .2 |
| Total | 3,692 | 100.0 |
| Company annual revenue | Number of firms | Percent of total |
| Less than \$5 m | 1,425 | 40.0 |
| \$5.1–\$25 m | 709 | 19.9 |
| \$25.1–\$50 m | 262 | 7.3 |
| \$50.1–\$250 m | 394 | 11.0 |
| \$250.1 m and above | 777 | 21.8 |
| Total | 3,568 | 100.0 |
| Industry | Number reported | Percent of total |
| Agriculture | 13 | .4 |
| Biotechnology | 107 | 2.9 |
| Communications | 234 | 6.4 |
| Construction | 82 | 2.2 |
| Consulting | 439 | .5 |
| Engineering | 130 | 3.5 |
| Finance, insurance, and real estate | 136 | 3.7 |
| Government | 82 | 2.2 |

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Table 1 (Continued.)

| Functional area | Number reported | Percent of total |
|-------------------------------------|-----------------|------------------|
| Industry | | |
| Manufacturing | 656 | 17.8 |
| Mining | 11 | .3 |
| Other | 79 | 2.1 |
| Not-for-profit | 114 | 3.1 |
| Retail trade | 118 | 3.2 |
| Services (other than consulting) | 619 | 16.8 |
| Transportation and public utilities | 95 | 2.6 |
| Wholesale trade | 124 | 3.4 |
| Total | 3,684 | 100.0 |

revenue, 40% report having revenue of less than \$5m in 2003, 20% report revenue between \$5.1m and \$25m, and 22% report revenues for 2003 at the \$250.1m or more level.

As you can see from reviewing Table 1, there is an over-representation of human resource management executives (30%). This is due to the University of Michigan's success in educational programs for this group; they both dominate the UM sample, and they may be more loyal to Michigan and more willing to complete the survey. At the same time, due to my interest in HRM, I often include additional questions related to HR topics; thus, prompting higher response from this group. For example, since the study was started (of those who did not opt out of the survey), 26% of the UM sample have participated, and only 7% of the Fortune 1000 sample have participated in at least one survey. In terms of overall response rate, of the total 47,000 people for whom we have names going out, 7.8% of the sample has responded. We estimate that most of those e-mails notifications are not reaching the individual participant due to spam blockers. Thus, if we assume 20,000 are getting the message, the response rate may be in the 18% range.

Overall, 41% of the respondents have been C-core executives (e.g. CEO, CFO, COO level jobs). An additional 20% are vice presidents, and 18% are director level. Thus, over 78% of the respondents are director level or above in their job titles.

On industry, all of the industries that we used for the survey are represented. For example, 17.8% of the sample is in manufacturing, 16.8% in service (other than consulting), .4% from agriculture, 2.6% in transportation and public utilities, 16.8% in services, and 2.9% in biotechnology. We even had representation from mining at .3% and construction, which is at 2.2%. Thus, from an industry perspective, the data seems fairly well distributed.

Resource movement

Since June, 2003, five questions that assess an overall scale called resource movement were asked in the survey. I started out asking the resource movement questions monthly, but I learned that the executives needed more variety in questions to continue participation. Thus, I moved to asking the resource movement questions quarterly (this was a suggestion of several participants). The question stem asks the respondents to what degree they expect to see movement in the next month or quarter on five resources: (1) sales, (2) customers, (3) products/services, (4) number of employees, and (5) net profits. The response is a Likert

scale format with scores ranging from 1 to 7, where 1 = substantially reduce, 4 = neither reduce nor grow, and 7 = substantially grow.

In order to do an initial exploration of the accuracy of the survey respondents' estimates of future movement in each resource, in the last quarter of 2003, respondents were asked to look backwards and report the level of actual growth for quarter 4 of 2003. Therefore, I was able to correlate their estimate of future growth with their report of actual growth. The correlations between the two for each variable for the sample of SME firms are as follows (all are significant at the .000 level): (1) sales = .61; (2) customers = .71; (3) employees = .53; (4) net profits = .51; (5) products/services = .59. Because a large part of the sample consists of public firms, and I have their identity, I am in the process of doing an analysis of actual performance vs. reported performance. The reliability coefficient for all five questions is over .80 for all time periods.

Firm performance

In addition, in each survey we asked respondents to report their firm performance compared to the performance of firms of their same size and in their same industry. The scoring system used a 1 to 5 Likert scale, with 1 = very low, 2 = low, 3 = average, 4 = high, and 5 = very high. For the purposes of the ANOVA analysis, the low through average ratings were combined into one category, and the high and very high rated scores were combined into a second category. A total of 1,786 firms were in the low performance category while 1,889 were in the high performance category. A total of 2.3% of the sample (84 firms) rated themselves as very low, while 15.3% rated themselves as very high. The firm performance data used for the ANOVA was taken from each participant's most recent survey (this varied based on how many surveys one person completed).

Data analysis and results

The analyses reported in this paper are primarily descriptive in nature. In order to further understand the nature of the sample and whether the SME subsample was significantly different from the rest of the firms in the overall study, an analysis comparing the subsample to the rest of the sample was conducted. This analysis involves an ANOVA examining the differences between each resource question for each time period studied between the SME and non-SME (501 and more employees) population. This analysis examines whether the growth pattern for the small and medium-size firms (as evidenced in the mean scores for each question) differed for the two samples. Table 2 reports the results of that analysis.

SMEs vs. larger firms

Sales: Using the .05 significance level, from June, 2003 to March, 2004, none of the time periods shows significant differences between the SME firms and the larger firms. The only month that comes close is the July data, and that number is at the .08 significance level.

Customers: Three of the data points show results with significant results at the .05 probability level. In each case (whether significant or not), the data shows larger firms growing the number of customers at a lower rate than do the smaller firms.

Table 2 Resource movement

| Items | N = Sample Size (MEANS-SD) | | | F | Sig. |
|---------------------------|-------------------------------|-------------------------------|-------------------------------|-------|------|
| | ≤ 500 | 501+ | ALL | | |
| Sales | | | | | |
| June-Project July | 4.67 (1.17) <i>n</i> = 355 | 4.68 (1.09) <i>n</i> = 442 | 4.68 (1.12) <i>n</i> = 797 | .01 | .92 |
| July-Project August | 4.83 (1.07) <i>n</i> = 270 | 4.68 (1.02) <i>n</i> = 335 | 4.75 (1.04) <i>n</i> = 605 | 3.08 | .08 |
| August-Project September | 4.84 (1.24) <i>n</i> = 472 | 4.82 (1.00) <i>n</i> = 274 | 4.83 (1.16) <i>n</i> = 746 | .04 | .84 |
| September-Project October | 5.09 (1.21) <i>n</i> = 608 | 4.96 (1.09) <i>n</i> = 204 | 5.06 (1.18) <i>n</i> = 812 | 1.89 | .17 |
| December-Project Q1.04 | 5.37 (1.16) <i>n</i> = 715 | 5.22 (1.07) <i>n</i> = 212 | 5.33 (1.14) <i>n</i> = 927 | 2.47 | .12 |
| March-Project Q2.04 | 5.23 (1.13) <i>n</i> = 305 | 5.09 (1.04) <i>n</i> = 114 | 5.20 (1.11) <i>n</i> = 419 | 1.55 | .21 |
| Customers | | | | | |
| June-Project July | 4.81 (.88) <i>n</i> = 359 | 4.72 (.97) <i>n</i> = 442 | 4.77 (.93) <i>n</i> = 801 | 1.94 | .16 |
| July-Project August | 4.90 (.85) <i>n</i> = 272 | 4.72 (.92) <i>n</i> = 337 | 4.80 (.89) <i>n</i> = 609 | 6.40 | .01 |
| August-Project September | 4.84 (1.04) <i>n</i> = 470 | 4.72 (.95) <i>n</i> = 275 | 4.80 (1.01) <i>n</i> = 745 | 2.48 | .12 |
| September-Project October | 5.20 (.99) <i>n</i> = 605 | 4.89 (.94) <i>n</i> = 205 | 5.12 (.98) <i>n</i> = 810 | 15.02 | .00 |
| December-Project Q1.04 | 5.14 (1.03) <i>n</i> = 714 | 4.93 (.94) <i>n</i> = 214 | 5.10 (1.01) <i>n</i> = 928 | 7.14 | .01 |
| March-Project Q2.04 | 5.01 (.93) <i>n</i> = 305 | 4.82 (.93) <i>n</i> = 114 | 4.95 (.93) <i>n</i> = 419 | 3.49 | .06 |
| Employees | | | | | |
| June-Project July | 4.22 (.95) <i>n</i> = 360 | 3.95 (1.09) <i>n</i> = 444 | 4.07 (1.04) <i>n</i> = 804 | 13.99 | .00 |
| July-Project August | 4.27 (.86) <i>n</i> = 273 | 3.95 (1.04) <i>n</i> = 339 | 4.10 (.98) <i>n</i> = 612 | 16.90 | .00 |
| August-Project September | 4.28 (.96) <i>n</i> = 473 | 4.04 (1.08) <i>n</i> = 277 | 4.19 (1.01) <i>n</i> = 750 | 9.74 | .00 |
| September-Project October | 4.48 (.99) <i>n</i> = 608 | 4.16 (1.03) <i>n</i> = 206 | 4.40 (1.01) <i>n</i> = 814 | 16.39 | .00 |
| December-Project Q1.04 | 4.67 (1.04) <i>n</i> = 718 | 4.34 (1.08) <i>n</i> = 214 | 4.59 (1.06) <i>n</i> = 932 | 16.39 | .00 |
| March-Project Q2.04 | 4.57 (1.04) <i>n</i> = 307 | 4.04 (1.13) <i>n</i> = 114 | 4.43 (1.09) <i>n</i> = 421 | 20.17 | .00 |

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Table 2 (Continued.)

| Items | N=Sample Size (MEANS-SD) | | | F | Sig. |
|---------------------------|-------------------------------|-------------------------------|-------------------------------|------|------|
| | ≤ 500 | 501 + | ALL | | |
| Net Profits | | | | | |
| June-Project July | 4.58 (1.16) <i>n</i> = 358 | 4.68 (1.14) <i>n</i> = 441 | 4.64 (1.15) <i>n</i> = 799 | 1.80 | .18 |
| July-Project August | 4.71 (.99) <i>n</i> = 270 | 4.68 (1.11) <i>n</i> = 335 | 4.70 (1.06) <i>n</i> = 605 | .16 | .69 |
| August-Project September | 4.66 (1.26) <i>n</i> = 473 | 4.82 (1.07) <i>n</i> = 271 | 4.72 (1.20) <i>n</i> = 744 | 3.06 | .08 |
| September-Project October | 5.03 (1.20) <i>n</i> = 605 | 4.94 (1.16) <i>n</i> = 197 | 5.01 (1.19) <i>n</i> = 802 | .92 | .34 |
| December-Project Q1.04 | 5.14 (1.12) <i>n</i> = 713 | 5.15 (1.01) <i>n</i> = 213 | 5.14 (1.10) <i>n</i> = 926 | .00 | .95 |
| March-Project Q2.04 | 4.95 (1.17) <i>n</i> = 303 | 4.96 (1.13) <i>n</i> = 113 | 4.96 (1.16) <i>n</i> = 416 | .01 | .93 |
| Products/Services | | | | | |
| June-Project July | 4.55 (.89) <i>n</i> = 359 | 4.61 (.89) <i>n</i> = 442 | 4.58 (.89) <i>n</i> = 801 | 1.06 | .30 |
| July-Project August | 4.57 (.89) <i>n</i> = 268 | 4.56 (.91) <i>n</i> = 336 | 4.56 (.90) <i>n</i> = 604 | .01 | .92 |
| August-Project September | 4.61 (1.00) <i>n</i> = 471 | 4.61 (.89) <i>n</i> = 270 | 4.61 (.96) <i>n</i> = 741 | .00 | 1.00 |
| September-Project October | 4.91 (.96) <i>n</i> = 605 | 4.80 (.96) <i>n</i> = 206 | 4.88 (.96) <i>n</i> = 811 | 2.20 | .14 |
| December-Project Q1.04 | 4.86 (1.00) <i>n</i> = 710 | 4.82 (.90) <i>n</i> = 212 | 4.85 (.98) <i>n</i> = 922 | .38 | .54 |
| March-Project Q1.04 | 4.76 (.94) <i>n</i> = 305 | 4.71 (.85) <i>n</i> = 114 | 4.74 (.91) <i>n</i> = 419 | .22 | .64 |

Employees: The employee data is the only category that shows statistically significant results (at the .000 level) for all time periods. In all cases, smaller firms have higher scores than do the larger firms. For example, in June, the mean for the SME sample is 4.22 (SD = .95), while the mean for the larger firms is 3.95 (SD = 1.09).

Net Profits: There were no time periods with significant differences (using the .05 level).

Products/Services: There were no significant differences in any time period on this particular resource.

Overall patterns show that for both smaller and larger firms, the mean scores increase from June, 2003 through December, 2003, but then in March, 2004 the numbers decrease, indicating projections of a downturn in growth in the second quarter of 2004.

Figure 1 plots both the customer and employee data because they were the resources with significant differences in the scores between smaller and larger firms. In both graphs, the higher scores for the SME sample are obvious; however, there do not appear to be any dramatic differences in the shape of the growth curves. Smaller firms seem to be moving in the same overall pattern as do the larger firms, increasing and decreasing from month to month in the same direction.

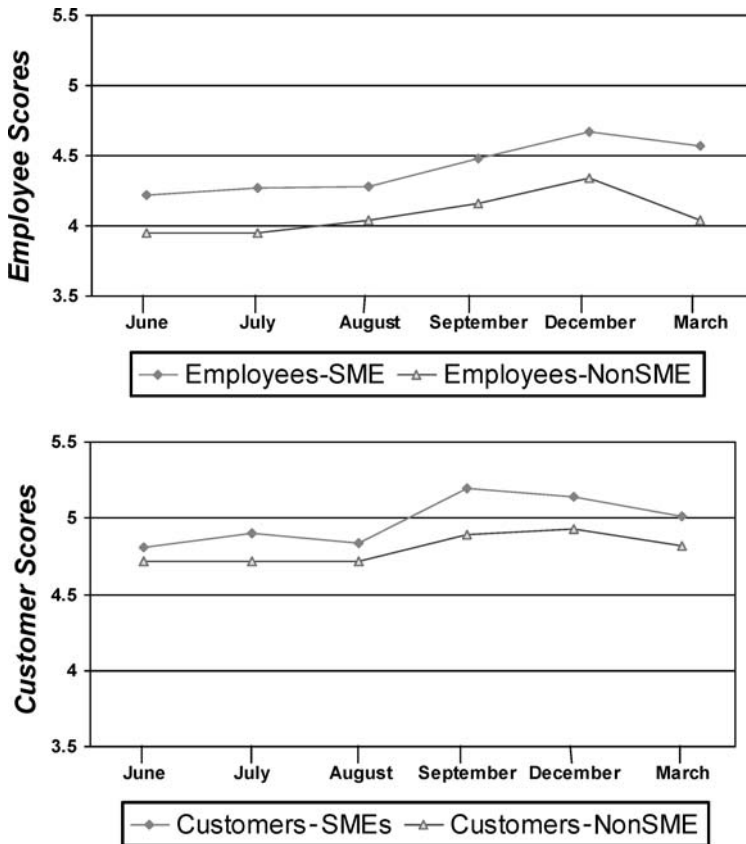


Fig. 1 Graph of employee and customer movement means July, 2003 to March, 2004 SME firms vs. larger organizations (non-SME population)

Analysis based on firm performance: SME sample only

The second analysis isolates the resource movement data for the SME sample only, and in Table 3 the results of a second ANOVA are reported. In this analysis, the SME sample is divided into low and high performing firms (as per their own self reported performance variable) to determine if growth trends differ for larger firms vs. the SME sample.

In this analysis, 80% of the ANOVA tests are significant at the .05 or less probability level. For the employee resource, all scores are significantly different. For the employee resource, the higher performing firms have higher scores each month. Thus, they are adding employees at a higher rate (or reducing at a lower rate) than their lower performing firm counterpart. The same pattern exists for all five resources. Also, the decline in Q2, 2004 projections are consistent with what we found in the large vs. small firm analysis. The SME sample (both low and higher performing firms) shows growth through March, 2004, and then the numbers trend downward.

In order to determine if there is any pattern of growth, I subtracted the low performing mean from the high performing firms mean scores on each resource and then put the difference scores in a table (See Table 4). I then highlighted the difference score that was highest during each time period to see if any patterns emerged. As you can see in Table 4, it appears that the

Table 3 Resource movement SME population only anova for low vs. high performance*

| Items | N = Sample Size (MEANS-SD) | | | | | F | Sig. |
|---------------------------|-------------------------------|------------------------|-----------------------|------------------------|-------|-----|------|
| | Low performing | High performing | Difference (high-low) | All | | | |
| Sales | | | | | | | |
| June-Project July | 4.47 (1.19) n = 162 | 4.84 (1.13) n = 192 | .37 | 4.67 (1.17) n = 354 | 8.94 | .00 | |
| July-Project August | 4.70 (1.03) n = 120 | 4.94 (1.09) n = 150 | .24 | 4.83 (1.07) n = 270 | 3.39 | .07 | |
| August-Project September | 4.72 (1.23) n = 274 | 5.00 (1.24) n = 196 | .28 | 4.83 (1.24) n = 470 | 6.11 | .01 | |
| September-Project October | 4.79 (1.27) n = 308 | 5.40 (1.06) n = 298 | .61 | 5.09 (1.21) n = 606 | 41.57 | .00 | |
| December-Project Q1.04 | 5.20 (1.23) n = 383 | 5.55 (1.04) n = 330 | .35 | 5.36 (1.16) n = 713 | 16.59 | .00 | |
| March-Project Q2.04 | 5.08 (1.14) n = 156 | 5.41 (1.11) n = 148 | .33 | 5.24 (1.13) n = 304 | 6.50 | .01 | |
| Customers | | | | | | | |
| June-Project July | 4.63 (.87) n = 161 | 4.96 (.86) n = 196 | .33 | 4.82 (.88) n = 357 | 13.00 | .00 | |
| July-Project August | 4.83 (.84) n = 122 | 4.97 (.85) n = 150 | .14 | 4.90 (.85) n = 272 | 1.80 | .18 | |
| August-Project September | 4.76 (1.06) n = 273 | 4.94 (1.01) n = 195 | .18 | 4.84 (1.04) n = 468 | 3.62 | .06 | |
| September-Project October | 5.01 (1.06) n = 307 | 5.39 (.88) n = 296 | .38 | 5.20 (.99) n = 603 | 22.47 | .00 | |
| December-Project Q1.04 | 5.04 (1.11) n = 383 | 5.26 (.91) n = 329 | .22 | 5.14 (1.03) n = 712 | 7.53 | .01 | |
| March-Project Q2.04 | 4.90 (.98) n = 156 | 5.12 (.87) n = 148 | .22 | 5.01 (.93) n = 304 | 4.19 | .04 | |
| Employees | | | | | | | |
| June-Project July | 3.92 (.91) n = 162 | 4.46 (.91) n = 196 | .54 | 4.22 (.95) n = 358 | 31.55 | .00 | |
| July-Project August | 4.12 (.79) n = 122 | 4.40 (.90) n = 151 | .28 | 4.27 (.86) n = 273 | 6.98 | .01 | |
| August-Project September | 4.09 (.88) n = 274 | 4.53 (1.01) n = 197 | .44 | 4.28 (.96) n = 471 | 25.01 | .00 | |
| September-Project October | 4.25 (.99) n = 307 | 4.72 (.94) n = 299 | .47 | 4.48 (.99) n = 606 | 35.81 | .00 | |
| December-Project Q1.04 | 4.49 (1.09) n = 383 | 4.87 (.93) n = 332 | .38 | 4.67 (1.03) n = 715 | 24.79 | .00 | |
| March-Project Q2.04 | 4.40 (1.05) n = 156 | 4.74 (1.02) n = 150 | .34 | 4.57 (1.04) n = 306 | 8.10 | .01 | |

(Continued on next page)

Table 3 (Continued.)

| Items | | | N = Sample Size (MEANS-SD) | | | |
|---------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------|------|
| | Low performing | High performing | Difference (high-low) | All | F | Sig. |
| Net Profits | | | | | | |
| June-Project July | 4.41 (1.17) <i>n</i> = 162 | 4.70 (1.13) <i>n</i> = 195 | .29 | 4.57 (1.16) <i>n</i> = 357 | 5.61 | .02 |
| July-Project August | 4.61 (.99) <i>n</i> = 122 | 4.80 (.99) <i>n</i> = 148 | .19 | 4.71 (.99) <i>n</i> = 270 | 2.66 | .10 |
| August-Project September | 4.50 (1.26) <i>n</i> = 274 | 4.88 (1.22) <i>n</i> = 197 | .38 | 4.66 (1.26) <i>n</i> = 471 | 10.74 | .00 |
| September-Project October | 4.75 (1.22) <i>n</i> = 307 | 5.33 (1.12) <i>n</i> = 296 | .58 | 5.03 (1.21) <i>n</i> = 603 | 37.23 | .00 |
| December-Project Q1.04 | 4.99 (1.19) <i>n</i> = 381 | 5.31 (1.00) <i>n</i> = 330 | .32 | 5.14 (1.12) <i>n</i> = 711 | 15.18 | .00 |
| March-Project Q2.04 | 4.73 (1.20) <i>n</i> = 156 | 5.20 (1.09) <i>n</i> = 146 | .47 | 4.96 (1.17) <i>n</i> = 302 | 12.51 | .00 |
| Products/Services | | | | | | |
| June-Project July | 4.44 (.83) <i>n</i> = 161 | 4.63 (.93) <i>n</i> = 196 | .19 | 4.55 (.89) <i>n</i> = 357 | 4.13 | .04 |
| July-Project August | 4.45 (.88) <i>n</i> = 119 | 4.66 (.89) <i>n</i> = 149 | .21 | 4.57 (.89) <i>n</i> = 268 | 4.05 | .05 |
| August-Project September | 4.55 (1.04) <i>n</i> = 274 | 4.68 (.92) <i>n</i> = 195 | .13 | 4.60 (.99) <i>n</i> = 469 | 1.95 | .16 |
| September-Project October | 4.75 (1.01) <i>n</i> = 306 | 5.08 (.87) <i>n</i> = 297 | .33 | 4.91 (.96) <i>n</i> = 603 | 19.04 | .00 |
| December-Project Q1.04 | 4.79 (1.06) <i>n</i> = 382 | 4.95 (.93) <i>n</i> = 326 | .16 | 4.86 (1.00) <i>n</i> = 708 | 4.63 | .03 |
| March-Project Q1.04 | 4.74 (.96) <i>n</i> = 156 | 4.78 (.91) <i>n</i> = 148 | .04 | 4.76 (.94) <i>n</i> = 304 | .19 | .67 |

*Firms rating their performance either very low (1), low (2), or average were combined into one category labeled “low” and the firms rating their performance high (4) or very high (5) were combined into a second category called “high.”

Table 4 Gap analysis low vs. high performing firms

| Resource | Time 1 | Time 2 | Time 3 | Time 4 | Time 5 | Time 6 |
|--------------------|--------|--------|--------|--------|--------|--------|
| Sales | .37 | .24 | .28 | .61 | .35 | .33 |
| Customers | .33 | .14 | .18 | .38 | .22 | .22 |
| Employees | .54 | .28 | .44 | .47 | .38 | .34 |
| Net Profits | .29 | .19 | .38 | .58 | .32 | .47 |
| Products/ Services | .19 | .21 | .13 | .33 | .13 | .04 |

*Notes:*This graph shows the gap between high and low firm mean scores on each resource for each time period. For example, .54 for employees at time 1 represents the mean score of 4.46 for high performing firms (on resource movement) minus the mean score for low performing firms, which is 3.92 (see Table 3).

Results indicate that the higher performing firms grew employees at a higher rate in the early months, then they grew sales at a higher level, then from sales to employees, and lastly at time 6, they grew net profits at a higher rate.

from June, 2003 to March, 2004 the gap analysis indicates that higher performing firms outpaced lower performing firms the most (highest difference score) on employees for time periods 1 to 3, and then they moved to sales (with net profit a close 2nd), and again to employees, and lastly to net profit.

Discussion

Resource movement

The preliminary examination of the data indicates a pattern showing that growth is stronger in the SME sample than it is in the larger firm sample. However, both samples indicate a downturn for quarter two of 2004. This descriptive data is useful for an overall understanding of the context of the research.

In terms of a test for the resource-based hypothesis, the results of this study only provide anecdotal evidence that growing employees early is something that higher performing firms do, and this may be associated with later sales and net profit growth. The pattern that emerges from the gap analysis supports this hypothesis, but the analysis is primarily descriptive. Thus, a true predictive test of the hypothesis could not be done with the data collected through March, 2004. Additional information about the firms, and further understanding of how they are growing each resource is needed in order to carefully understand the causal nature of the growth process and how it affects firm performance.

Learning from multiple types of data

In March, 2004 I learned two things. First, I read the comments from over 500 executives who talked about why they are currently de-energized, de-motivated, and overall not encouraged by the economic conditions. In addition, for the first time since starting the survey in June, 2003 I learned that executives are anticipating lower growth for the second quarter of 2004.

I then combined this knowledge with the results of the analysis of the resource growth data. Although the gap analysis is very descriptive in nature, it suggests that higher performing firms may have chosen to grow the number of employees first, and it may have led to greater growth in sales and net profit later. With only the gap analysis, I think it is very difficult to understand what the data mean. But combined with the theoretical work and the comments about energy, the story begins to come together for me.

Firms that choose not to add employees early will use their current resources to do the work associated with any new sales or customers that are acquired. When this happens, the company is in constant “catch-up” mode. Reconsider some of the comments from earlier in this paper:

“Energy levels are higher when we are on the street looking for business or mergers. Then leaders get caught in the drudgery of producing, burn out slightly, and go on to new challenges, with higher energy levels.”

“Leaders like change, and moving forward. And leaders know what it takes to move forward.”

If the leaders of companies that did not hire employees early enough are “processing” current sales and current customers, they are not looking forward to grow their firms. This type of “drudgery” can have negative consequences on the leader, and this then affects the overall company. It is possible that the focus on controlling costs had led to situations where

no one is “moving forward.” This conclusion cannot be empirically validated with the study presented in this paper, but certainly the pieces of the puzzle start to come together in a way that seems logical and supports the theoretical arguments noted earlier.

Learning from the research method

From June, 2003 to December, 2003 I saw indications in multiple questions that executives were starting to lose confidence in themselves, energy levels were low, and they reported concerns over business growth. Being unable to completely understand what the patterns meant (significance tests were not enough), I decided to add a question in March, 2004 that was designed to simply ask these executives to decipher the data for me. I asked the respondents to report what they thought about the data. I received ample explanations.

Therefore, as I grapple with the data on growth patterns, I will turn back to the survey population for further assistance. A next step in the research strategy is to ask the executives in a future survey about their growth patterns. By adding the qualitative data with more rigorous archival data (from those firms for whom this data can be found), the research should be strengthened.

The research project has been a very fluid one, with only core questions on resource growth and leadership confidence (not discussed in this paper) remaining stable. We’ve learned a lot about engaging participants, about SPAM, and about feeding data back to respondents.

Most importantly, I’ve learned that with an accumulation of data, you can drive action that may be very important. The combination of quantitative and qualitative data (which did not take long to collect) spurred several executives to examine their leaders’ profiles. And many companies are finding that they’ve stretched people just about as far as they can.

Limitations

This research has limitations as well as promise. First, the sample selected is not representative of all businesses; thus, conclusions have to be based on an understanding of the people in the sample. Fortunately, there is a mix of large and smaller firms, industry representation, and type of respondent, and firm size.

Second, the findings rely on self report measures of performance. Although an analysis of their forward projections and reflective assessments show a high correlation, caution must be used in interpreting the results. Of course, the use of multiple time periods helps minimize the problems of self report data, but it remains a concern.

Third, the responding sample changes each time a survey is done (although there is a core of about 200 people who seem to be responding at least more than one time period in a row). With a study this frequent, and given the targeted population of senior executives, one cannot expect a consistent response. Although as the data becomes promoted in more popular press outlets, there is a chance that the benefits of receiving the data may outweigh the time costs, and we will see more respondents join the study.

Fourth, given that the same people do not answer each time, it is difficult to get a core group of firms that can be followed over time. Thus, although we have the benefit of multiple time periods of data collection, the loss of tracking the same firm over time decreases our ability to discuss causality with confidence.

Conclusion

Steps toward research agility include a high level of risk and ambiguity, but the learning associated at least with this project has been very significant. There also is much promise in being able to combine research immediately with executive education. Executives respond to information that is important for them today, and the promise of improving the timeliness of our studies and getting the results in the hands of people who can take action needs to be weighted as a variable when considering various research methods.

The research project itself has the potential to become a valuable, imperfectly imitable, and rare resource because the people who respond to the survey become part of the learning process. Their willingness to continue to share information cannot be underrated. If one peruses the comments from June, 2003 to March, 2004 you would immediately see that length and quality of the comments improve over time. Respondents are becoming part of the process, and they are sharing ideas, taking time to provide thoughtful answers, and their participation will grow over time if we provide them with new opportunities to be involved in the learning process.

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