The relationship between written business plans and the failure of small businesses in the U.S.*

by Stephen C. Perry

The objective of this study was to investigate the influence of planning on U.S. small business failures. A "failure" was defined as a bankruptcy with losses to creditors; firms with fewer than 500 employees were considered "small." Recently failed firms were selected randomly and matched with non-failed firms on the basis of age, size, industry, and location. The sampling frame was businesses listed in the Dun & Bradstreet credit reporting database. A paired-sample t-test was used to investigate differences between the failed firms and matched non-failed firms. The main conclusion was that very little formal planning goes on in U.S. small businesses; however, non-failed firms do more planning than similar failed firms did prior to failure.

Well-known practitioner-oriented authors such as Peter Drucker captured the central role of planning long ago. Professor Drucker expressed it as follows: "Planning what is our business, planning what will it be, and planning what should it be have to be integrated... Everything that is 'planned' becomes immediate work and commitment" (Drucker 1973, p. 122, emphasis in the original). Writers of popular textbooks used in courses on the fundamentals of management (for example, see Stoner and Freeman 1992) often describe "planning" as the first of four basic and essential managerial tasks. With books and related software crowding the shelves of bookstores and with courses that emphasize planning well-represented in college catalogs, it would seem that there is nearly universal agreement that planning is essential for business success. Nevertheless, some authors caution that planning can be overdone, incorrectly done, and ineffective (Minzberg 1994), while others seem to delight in firms having survived while avoiding it altogether (Baechler 1996).

Since planning is just one of several managerial tasks, the linkage between planning and success or failure has been difficult to establish and even more difficult to quantify. Indeed, most studies and reviews of business failures have tended to be anecdotal (for example, see Argenti 1976; Barmash 1973; Caggiano 1996; Cullinane 1992; D'Aveni 1989; Elias 1994;)

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Goddard 1993; Gross 1993; Hise 1997; Makridakis 1991; McGovern 1993; Petzinger 1997; and Vander Weyer 1994), or they have tended to be lists of leading causes or symptoms (for example, see Dennis 1992; Hodgetts and Kuratko 1995; Hogarty 1993; Keasey and Watson 1987; Labich 1994; Longnecker and Moore 1991; Lurie 1992; Peterson, Kozmetsky, and Ridgeway 1983; Porter 1991; Posner 1993; Tayanipour 1985; Toncre 1983; Vesper 1990; Von Soosten 1993; Zimmerer and Scarborough 1994). The most frequently cited cause of business failure is the somewhat simplistic and all-encompassing notion of "poor management" or a "poor management team" (see Allen 1995; Hodgetts and Kuratko 1995; Kharbanda and Stallworthy 1985; Laitenen 1992; Peterson, Kozmetsky, and Ridgeway 1983; Zimmerer and Scarborough 1994). John Argenti's seminal work in this field put it rather well: "While everyone agrees that bad management is the prime cause of failure no one agrees what 'bad management' means nor how it can be recognized except that after the company has collapsed—then everyone agrees how badly managed it was" (Argenti 1976, p. 3). Consistent with the finding expressed by Rue and Ibrahim (1998) that "the literature strongly supports the argument that, in small business, planning is a key issue," the purpose of this study was to explore the relationship between planning and failure for small businesses in the U.S.

**Methodology**

**Sample**

The research design for this study featured paired samples of failed and non-failed small businesses in the U.S. The sampling frame was the more than ten million companies listed with Dun & Bradstreet Corporation (D&B) and recorded in its credit reporting database. A small business was defined as one with fewer than 500 employees. (This definition is normally used by the U.S. Small Business Administration.) A failed firm was defined as one that had filed for bankruptcy protection with a loss to creditors. The data collection procedure was to select randomly from the National Bankruptcy Bulletin (a weekly publication of D&B) a group of failed firms that could be cross-referenced with the D&B credit reporting database using MarketPlace software purchased from an affiliate of D&B. For those firms that matched, a letter was sent via priority mail describing the study and advising the recipient (the owner, the CEO, or the CFO of the company—henceforth also referred to as the "leaders" of the company) that he or she would receive a telephone call within a few days with the intent of soliciting his or her responses to a questionnaire. A professional telephone survey research firm was employed to conduct the telephone interviews. Because prior studies have noted that the managers of failed firms tend to scatter rather quickly after a declaration of insolvency and to become difficult to contact (Bruno et al. 1987, 1988, and 1992), speed in making contact with the top management of the failed (bankrupt) firms was essential. The telephone survey research firm was successful in contacting about half of the firms for whom valid D&B records were available and to whom introductory letters were mailed. In all but a handful of cases, if contact with the leader was established, a successful telephone interview was conducted. Successful interviews with failed firms were then matched with companies in the D&B credit reporting database that had not failed and that were similar in age, industry (four-digit Standard Industrial Classification (SIC) code), size (annual sales and number of employees), and location (zip code, state, or region). Where the matching criteria yielded multiple candidates, a random selection procedure was used to determine the order in which the non-failed candidates would be approached for a response to the questionnaire. Again, there were fewer than five refusals to be interviewed once contact was made; therefore, non-response bias is
not an issue in this study, although there could be differences between the firms that could be contacted and those that could not be contacted. The survey took place during the summer of 1997 and yielded 152 matched-pair cases.

Companies selected randomly for inclusion turned out to be predominantly small retail firms (67 percent). Summary statistics describing the sample are presented in Table 1. Very few of the firms were franchises (5 percent), and the dominant source of start-up capital was personal funds (84 percent). The average years of relevant industry experience of the primary leader at the inception of the business was about nine and one-half years, and the average years of formal education of the primary leader was about 14 years (12 years being equal to a high school diploma).

**Questionnaire**

The portion of the questionnaire dealing with the extent of planning was developed after several discussions with small business owners, and the entire questionnaire was pretested by a mailing of the introductory letter to 106 target companies followed by telephone interviews with the 43 respondents who were successfully contacted. The resulting scheme featured five simple questions designed to elicit a yes or no response. Respondents were also asked in every case whether their planning activities resulted in a written document, the implication being that to qualify as sufficiently formal and substantive, the planning activity needed to produce a written document. Finally, the five extent-of-planning questions were as follows:

1. Does/Did your business prepare a written sales forecast?
2. Does/Did your business prepare a written staffing forecast?
3. Does/Did your business prepare a written forecast of cash requirements for at least 12 months into the future?
4. Does/Did your business prepare a written pro forma capital expenditure forecast?
5. Does/Did your business analyze its competition and prepare a written identification of strategies and measurable goals which extend/extended three or more years into the future?

Each “yes” answer was given a score of one point; therefore, the range of scores for this item was from zero to five.

**Results**

Table 2 presents the results, which clearly imply that very little planning takes place in U.S. small businesses. The first

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**Table 1**

**Characteristics of the Paired Sample of Both Failed (FF) and Non-Failed Firms (NFF)**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>FF</th>
<th>NFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age (in years)</td>
<td>11.0</td>
<td></td>
</tr>
<tr>
<td>Maximum number of employees (median)</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Average annual sales</td>
<td></td>
<td>(FF)/4(NFF)</td>
</tr>
<tr>
<td>Initial investment, mode (76 percent)(^a)</td>
<td></td>
<td>$425,000</td>
</tr>
<tr>
<td>Predominant legal form, mode (56 percent)(^b)</td>
<td>Less than $25,000</td>
<td>Proprietorship</td>
</tr>
<tr>
<td>Gender of primary leader (male/female ratio)</td>
<td></td>
<td>1:8:1</td>
</tr>
</tbody>
</table>

\(^a\) The choices were: less than $25,000; $25,000 to $100,000; and more than $100,000.
\(^b\) The choices were: “C” corporation, “S” corporation, Partnership, and Proprietorship.
Table 2
Results for Extent of Planning

<table>
<thead>
<tr>
<th></th>
<th>Failed Firms (FF)</th>
<th>Non-failed Firms (NFF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 152 )</td>
<td>( n = 152 )</td>
</tr>
<tr>
<td>Mean</td>
<td>1.145*</td>
<td>1.507*</td>
</tr>
<tr>
<td>Standard Dev./ Std. Error</td>
<td>1.712/0.139</td>
<td>2.147/0.174</td>
</tr>
<tr>
<td>Number of “0” Scores</td>
<td>92</td>
<td>98</td>
</tr>
<tr>
<td>Number of “5” Scores</td>
<td>13</td>
<td>35</td>
</tr>
</tbody>
</table>

* \( p = 0.04 \) for significance of separation of means.

significant observation which emerges from these data is that the means for extent of planning are quite low in both cases. The frequency charts for these data are also revealing. While both groups (failed firms and non-failed firms) had a large number of “0” responses indicating no planning, the non-failed firms group distinguished itself from the failed firms group in that if any planning at all was done, there was a tendency to do a moderate amount of it; that is, to move upward toward a score of “5.” Therefore, the second significant observation is that the planning activities that comprised the extent-of-planning index appear to constitute a logical set of component parts such that if one of the activities is engaged in, it is increasingly likely that the others will be undertaken as well. In other words, it may be that small business managers tend to be either planners or non-planners, with few occupying the middle ground. If they are planners, they tend to engage in multiple planning activities such as the ones enumerated in the questions for this study. The third and final observation is that the difference in means was statistically significant, suggesting that the extent of planning is related to firm failure.\(^1\) While the explanatory power of this one variable taken in isolation was weak,\(^2\) there are nevertheless strong indications here that planning does make a difference and can reduce the probability of firm failure.

In a recent study similar in some respects to this one, Rue and Ibrahim (1998) investigated the relationship between planning sophistication and performance. Generally speaking, their results were statistically inconclusive (assuming the normal threshold for rejecting the null hypothesis of “no relationship” of \( p < .05 \)) except for the finding that firms with no

\(^1\) The \textit{a priori} hypothesis was that non-failed firms would average a higher extent-of-planning score compared to failed firms. Therefore, a one-tailed test was applicable. The resulting value for “\( p \)” was 0.04 which indicates that the likelihood of these results occurring in a sample of this size taken from a population in which there is no relationship between extent-of-planning and failure was approximately 4 chances in 100. The author acknowledges that a statistical tool designed primarily for use with ratio/interval dependent variables has been put to unconventional use in the analysis of an ordinal variable in the name of exploratory research and with the intent of pointing the way to more definitive and rigorous research in the future.

\(^2\) Pearson’s \( r \) was equal to 0.16—about 2–3 percent of the total variation was explained.
written plans exhibited a slower growth rate than firms with more sophisticated planning. However, they restricted their sampling frame to firms with at least fifteen employees, and their sample had a median number of employees of seventeen. If the focus of this study is narrowed to the 13 failed firms and 35 non-failed firms that scored a “5” on the extent-of-planning questions, the median for maximum employment rises from four or five to nine. This suggests that there is likely to be some minimum employment level (perhaps in the range of 5 to 15) below which formal (written) planning has marginal value. For the very small businesses below this threshold, the limited scope, scale, and complexity of the business are conducive to simple and intuitive planning approaches; and the communication of plans may not require written documents since so few people are involved.

**Discussion**

Using the definition of a small business as one with fewer than 500 employees, 99 percent of the 21 million entities filing a business tax return in the U.S. are small businesses. Consistent with the findings in this study, approximately half of the small businesses have fewer than five employees and 90 percent have fewer than 20 employees. Approximately 70 percent are sole proprietorships. (Dennis (1993) was the source of all of the small business statistics cited earlier in this paragraph.) With business failure rates averaging about 70,000 firms annually in recent years and the related liabilities averaging about $40 billion annually (Perry 1998), even a modest reduction in the failure rate would yield significant national benefits. Nevertheless, some population ecologists relate failure rates to firm density (Suarez and Utterback 1995) and appear to see failure as a natural and perhaps even desirable phenomenon akin to Darwin’s survival of the fittest. Others see failure in a Schumpeterian sense as part of the “creative destruction” which naturally accompanies free societies with economies based on private enterprise. Nevertheless, with a clearer understanding of the causes of business failure, some unsound businesses will not be initiated and some ailing businesses can be rescued.

**Formal (Written) Planning Versus Firm Size (Employee Count)**

While this study found a statistically significant relationship between planning and firm failure, the explanatory power of the relationship was weak. A possible explanation for the lack of strength lies in the fact that formal (written) planning is rarely undertaken by firms with fewer than five employees, and indeed it may have limited value and utility for such tiny businesses, especially if they are not required to develop a “business plan” in order to borrow money or to establish commercial credit with vendors or lessors. An examination of employment size of firms with high extent-of-planning scores seems to confirm this notion. Therefore, future research on the relationship between planning and firm failure or performance might be advantageously focused on firms with at least five employees, and one might not expect to find more sophisticated planning in firms with fewer than 15-20 employees.

**Limitations**

The construct used to measure planning in this study was certainly a “rough cut” at a very complex set of activities. In addition, like most previous efforts in this field, this study relied upon self-reported data which is always subject to respondent biases such as the desire to create a favorable image of oneself or to please the interviewer/surveyor. The main threats to validity with this research design were instrumentation and reactivity. Instrumentation was a threat in that changes in the scorers (that is, the various small business leaders responding to the telephone interviewers) could produce changes in the measurements obtained. Reactivity could be a problem to the extent that the process

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of measuring could change that which is being measured—that is, the act of responding to the survey could cause respondents to alter their responses in ways which diverge from the true facts. Second source verification of selected data was performed on a subset of the sample to estimate the extent to which instrumentation and reactivity were problems in the data collected, and the data were found to be consistent. In addition, tests of interrater and intercoder reliability were performed with satisfactory results.

**Generalization**

Since the sample was drawn randomly from a population that covers the entire United States, the study results permit generalization to the entire United States. However, the study depended upon the comprehensiveness of Dun & Bradstreet in detecting and recording bankruptcies. Therefore, to the extent that business failures are not recognized by Dun & Bradstreet, the study falls short of being totally comprehensive. This situation is most likely to occur in the case of very small firms which avoid the use of trade credit and illegal firms which not only avoid trade credit but take special precautions to maintain very low corporate visibility. However, practically speaking, the study results should be safely generalizable to U.S. firms which utilize trade credit and which engage in legal business activities.

Finally, this study endeavored to discover statistically significant relationships and associations of more than a trivial magnitude. It did not attempt to rule out spuriousness, or to postulate theories or intervening mechanisms. Therefore, the study stops short of inferring causation and leaves that task to future research. However, one practitioner-oriented recommendation flows logically from the findings and conclusions: if your small business employs five or more people, you should consider engaging in the planning activities implied by the five questions used in this survey to measure the extent of planning, because doing so may enhance your chances of survival and success.

**References**


