

**Evaluation of the Effectiveness of Business
Planning using Palo Alto's Business Plan Pro**



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Abstract:

The belief that business planning is an effective or even essential tool for business success is prevalent in the business world. However, recent literature has challenged this long-held assumption, claiming a neutral or even detrimental effect. This literature has not been directed at business planning according to software—a relatively new advent. This paper examines the relationship between planning and success in the new light of business planning software. Results suggest that planning with software is highly correlated with subsequent successes for a variety of firms.

Introduction:

In almost any undergraduate education, a business student is instructed on the importance of a business plan. Further, the first advice offered to many aspiring entrepreneurs is to complete such a plan. This ubiquity would suggest the perceived effectiveness of business planning in the mainstream business world.

These plans are often completed according to a given template and are highly structured. One such method for structured planning is through software. A supposed asset of business planning through software is its interactive nature; through interacting with the software, there is potential for tailoring planning to a specific business. Evidence suggests that the types of planning that help firms succeed change as those firms age (Hills Lumpkin Shrader). If so, the ability of business planning software to adapt to the customer is a potential merit. Though business planning remains prevalent, recent literature has aimed to dispel its perceived

effectiveness (Bygrave) while others have attempted to show only a near-term effectiveness (Baucus).

In light of the controversy over the practicality and effectiveness of business planning, this paper will address the question of whether business planning with software--specifically Palo Alto's Business Plan Pro--is an effective venture. It will also demarcate firms according to intent for completing business plan, industry of the firm, and age of firm, in order to evaluate the effectiveness of identified groups within these distinctions. This will allow for analysis of effectiveness of business planning by industry, by intent, and by age of firm.

Literature Review

Literature suggests that detailed and coherent planning can guide new entrepreneurs in making decisions quickly and effectively when faced with the situations covered by business plans. (Cyert and March, 1964) Moreover, new firm founders collect and analyze information about their business in the process of planning. This information facilitates the development of business strategies, allowing entrepreneurs to recognize the risk in business projects and even explore new business opportunities for the company. (Castrogiovanni, 1996) However, the prior literature also show the other extreme side of the opinions about the effect of business planning on the success of the new ventures. More studies show that business planning is irrelative or has the insignificant correlation to the performance of the new companies. One such view was detailed by Bhide (2000). He stated that business planning impedes the development of the new venture because the new entrepreneurs spend too much time and energy in making a detailed plan rather than taking real actions of business. However, if the business plan cannot help the new ventures to succeed, why do so many people still do the business plan? Some suggest it is

because most people write a business plan before launching their business just for supporting their financing projects—such as securing a loan from banks or getting the external capital investment from third investor groups. (Mahdjoubi,2004)

Other studies show the effect of planning can be determined by the time and environment. Rauch and Frese (1998) found that business planning does not have a long-term effect on the success of ventures and that the impact of planning can be eliminated by environmental factors. Ford, Matthew and Baucus also got the same result from their research that the degree of the business plan completion is just positively significant to the financial results of the new ventures in the short term (within 1 year).

There are several methods to estimate the influence of the planning on the small business operation. Rauch and Frese conducted a longitudinal study base on 104 small scale enterprises to test the impact of planning on business under the environmental unfriendliness and uncertainty. Schwenk and Shrader (1993) combined the prior literatures and compare the results through a meta-analysis, to examine the effect of business planning on the small business. The most common method to estimate the effect of business planning of firms' performance is the regression analysis and cross-sectional descriptive statistic. The researchers in Babson College conducted a survey among 117 new ventures created by the graduates from their college range from 1985 to 2003. They used the collected data set to examine the relationship between business planning and performance based on the regression analysis. They put the expected factors of the business success, which are mostly the characteristics of the founders, into the regression, such as experience and education, and define the business plan as the score of the importance of the business purpose in their plans. The results revealed that business planning is

statistically insignificant to the business performance (Julian, William, Aleksandra, Michael and Sunil Singh, 2005). Delmar and Shane (2002) examine 233 new ventures by regression analysis using different regression models. These models focus more on the industrial environment and the property of the firms, like the competitive advantage of the firms and the exit rate in the industry. Their analysis shows that the business plan strengthens the product development and company management and reduces the possibility of new ventures' closure by facilitating decision making and guiding the concrete business actions following the goals step by step. One aspect of our analysis will be to control for age of firm, because firms will have the different issues and conditions to face with during the different period. (Lumpkin, Shrader, and Hills 1998)

Method:

The data set in this study is drawn from a group of entrepreneurs taken from the customer list of Palo Alto Software. Included are all firms who purchased Business Plan Pro in the past 2 years, or have downloaded the same software through a recent "boost" wherein participants could obtain a free copy. Data were obtained through an online survey asking participants to answer 23 questions relating to various aspects of their business, as well as how much of their business plan they have completed. 2877 responses were received.

Very few studies have been able to ensure a uniformity of business planning between firms. However, given the assumption that firms who have purchased the software have designed their plan through it, some uniformity in the formal structure of the plan can reasonably be assumed across firms. Further, because participants were able to indicate incremental completion

of the business plan--none, 1/4, 1/2, 3/4 or entirely finished--data can be gained and used to effectively compare how much business planning a given firm has done relative to another.

This evaluates the effectiveness of business planning for firm success within the data set. To do this, several success variables were distilled from the survey. Respondents were asked whether they had, since completing their business plan, secured a loan, secured investment capital, recruited additional team members (employees or contractors), been able to think more strategically about their business, grown their business, or made a major purchase (equipment, facilities, etc.) Each of these successes was used to create an indicator variable wherein 'yes' is 1 and 'no' is 0. Though these variables are flawed in that the question through which they were derived implies the completion of a business plan, they are the best measures of success in the survey.

Questions in the survey also pertained to the purpose for which Business Plan Pro was used. These questions were translated into several 'intent' variables that often corresponded with a particular success (e.g. "did you use Business Plan Pro to grow your business?" corresponds with success in growing a business) Thus, analysis of business planning on individual successes will be conducted across the sample, and will also be constrained to those using the plan for the particular success in question. Oftentimes intent of using plan does not match up exactly with a single success variable, in which case the analysis was not constrained or the nearest intent variable was used.

Respondents were asked which of five descriptors best described their business: manufacturer; wholesaler; retailer; franchised; or web-based business. Regressions were run to analyze the effect of business planning on various successes when constrained to each particular

group. This was done in order to analyze the relative effectiveness of business planning within each of these demographics.

Another variable of interest for regression analysis was the age of the firm. This variable was assigned a value of 0-4 based on a question with responses ranging from 'not a legal entity' to over 10 years. It will also be used to control for age in the regression analysis by splitting firms into two groups: those greater than seven years old and those less than seven years old. Seven years is considered an important age for a firm because of prior studies that indicate that most firms require seven years to become established (Biggadike, 1979).

Analysis:

Ordinary least squares regression analysis was used for the evaluation of business plan effectiveness. Each of the success variables was used as an independent variable separately, while amount of business plan completed was used as an explanatory variable. Differences in type of business, intent of using business plan, and age of firm were systematically controlled for by restricting the regression to only those subjects that responded "yes" to the particular question. T-tests were used to determine significance of the coefficients. In the tables provided, one asterisk corresponds to significance at the 90% level ($p < .1$), two asterisks corresponds to 95% significance ($p < .05$) and three corresponds to 99% significance ($p < .01$). T-values are given in parentheses below the coefficients. In the absence of an experimental design, our statistical analysis can only establish statistical correlations, not paths of causality, so readers should keep this distinction in mind.

Results:

The analysis indicates that completion of a business plan is positively correlated with every success variable indicated, even when controlling for intent of using the business plan. Coefficients were statistically significant ($p < .01$) in these cases as indicated in Table 1. Successes interacted differently with intended successes for different variables. Those intending to secure a loan and those intending to secure investment capital had higher effects for their respective corresponding variables. This implies that specific intent in using a business plan to accomplish these successes is positively correlated with the chance of succeeding at them. However, those intending to recruit a new team member and those looking to think more strategically had a significantly lower coefficient on business planning than the corresponding coefficient across the entire sample, suggesting that these successes are more likely when the business plan is not intended to help specifically with them.

The results differ, however, when controlling for industry. Franchised business, for example, do not seem to respond as well to business planning. The only success that was significantly affected at the $p < .05$ level for these firms was how to think more strategically (Table 2). For all other types firms, coefficients were significant at the 5% level on all independent variables except in manufacturing and wholesale firms which did not have significant coefficients on making a major purchase or recruiting a new team member (Tables 3 & 7, respectively). These insignificant relationships may have to do with the fact that the sample size for Franchised businesses was relatively small ($n=77$) as were those for manufacturing and wholesalers to a lesser degree ($n=335, 192$ respectively).

Controlling for age of firm yielded results similar to those found when controlling for industry. Both groups—those greater than 7-years-old (Table 9) and those less than or equal to (Table 8)—had positive correlation of business planning with every single success variable. While this does not show the relative importance of business planning between the two groups, it shows that in both groups, amount of business planning is related to success.

Caveat and Limitation

This research has some weakness that can be strengthened in the next revised version. First, in our regression model there is just one explanatory variable, completion of the business plan while we control the variable of the age of the firm. It is too simple to explain the achievement of the business because it easily catches other factors that have impact on the business performance. According to the previous research, the variables describing the characteristic of entrepreneurs, demonstrating the property of the firms and industries, have the influence on the business achievement though most of them have the weak significant correlation with the success of the firm. In our data set, there are several dummy variables which describe whether people get help from outside resources, such as help from university and help from advisor (If people did get help, the dummy variables will turn to 1). We can create a variable called “totalhelp” that sum the value of these dummy variables up. This variable is used to indicate how much help the founders get from others to achieve their business goal and we expect it will be significantly positive correlated to the achievement of business planning.

Second, there are some caveats in the data that we collect. The variable of the completion of business plan is too rough. Basically, we just ask the observation to make the choice of how much proportion of the business plan they have done (The choice is “1/4 of total business plan”).

Obviously, it is not sufficient to describe the degree of a business plan. Especially, we do not have the variable indicating the quality of the business planning or the variables describing the degree of the implementing the business plans. Moreover, the measures of the achievements of business planning are not accurate if we just use the dummy variable to collect it. For example, the value of variable measures whether the people succeed to secure a loan or not is just one or zero, which cannot tell the difference between \$500 loan and \$50,000 loan. In all, If we can collect more detailed information through the survey, we can make a more accurate analysis.

Conclusion:

Except in a small number of cases, business planning appeared to be positively correlated with business success as measured by our variables. Having a data set with many observations probably contributed to findings of statistical significance where other studies had been unable to do so. This is corroborated in that it was only in control groups with the smallest number of observations that statistical significance was lost in correlating business planning with success. While our analysis cannot say that completing a business plan will lead to success, it does indicate that the type of entrepreneur who completes a business plan is also more likely to run a successful business.

Table 1: Relation of Successes with Completion of Business Plan With Controls For Intent of Business Planning

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
VARIABLES	Unrestricted Secured Loan	Secured Loan When Looking To Secure Loan	Unrestricted Secured Investment Capital	Secured Investment Capital Looking To Secure Venture Capital	Unrestricted Recruit New Member	Recruited Team Member Looking to Grow Business	Recruited Team Member When Looking to Manage Business	Unrestricted Think More Strategically	Think More Strategically When Looking To For New Or Existing Business	Unrestricted Grow Business	Grew Business When Looking To Grow Business	Unrestricted Major Purchase	Major Purchase When Looking to Grow Business
Amt. of Plan Completed	0.0456*** (10.29)	0.0691*** (6.61)	0.0455*** (10.45)	0.0748*** (5.72)	0.0334*** (6.47)	0.0244*** (2.59)	0.0267*** (3.10)	0.0744*** (14.16)	0.0549*** (8.29)	0.0614*** (11.29)	0.0694*** (7.12)	0.0206*** (4.92)	0.0208*** (2.67)
Constant	0.0825*** (6.68)	0.127*** (4.17)	0.0747*** (6.16)	0.0995*** (2.64)	0.203*** (14.13)	0.285*** (10.98)	0.259*** (10.95)	0.505*** (34.53)	0.614*** (33.05)	0.219*** (14.42)	0.312*** (11.66)	0.109*** (9.35)	0.139*** (6.52)
Observations	2,877	815	2,877	504	2,877	1,088	1,281	2,877	1,811	2,877	1,088	2,877	1,088
R-squared	0.035	0.051	0.037	0.061	0.014	0.006	0.007	0.065	0.037	0.042	0.045	0.008	0.007

t-statistics in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Table 2: Firms Designated As 'Franchised'

VARIABLES	(1) Secured Loan	(2) Made Major Purchase	(3) Secured Investment Capital	(4) Recruited New Team Member	(5) Think More Strategically	(6) Grew Business
Business Planning	0.0549* (1.72)	0.0359 (1.20)	0.0493 (1.58)	0.0577* (1.79)	0.0669** (2.21)	0.00704 (0.21)
Constant	0.165* (1.77)	0.147* (1.68)	0.153* (1.68)	0.171* (1.82)	0.578*** (6.54)	0.334*** (3.36)
Observations	77	77	77	77	77	77
R-squared	0.038	0.019	0.032	0.041	0.061	0.001

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 3: Firms Designated As 'Manufacturing'

VARIABLES	(1) Secured Loan	(2) Made Major Purchase	(3) Secured Investment Capital	(4) Recruited New Team Member	(5) Think More Strategically	(6) Grew Business
busplan	0.0589*** (3.69)	0.0277* (1.90)	0.0747*** (4.53)	0.0208 (1.16)	0.0613*** (3.76)	0.0378** (2.08)
Constant	0.108** (2.28)	0.120*** (2.78)	0.106** (2.16)	0.314*** (5.91)	0.565*** (11.67)	0.315*** (5.83)
Observations	335	335	335	335	335	335
R-squared	0.039	0.011	0.058	0.004	0.041	0.013

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4: Firms Designated As 'Service-Based'

VARIABLES	(1) Secured Loan	(2) Made Major Purchase	(3) Recruited New Team Member	(4) Think More Strategically	(5) Grew Business
Business Planning	0.0467*** (8.04)	0.0152*** (2.77)	0.0326** (2.48)	0.0559*** (8.41)	0.0553*** (7.67)
Constant	0.0828*** (5.01)	0.123*** (7.92)	0.211*** (6.02)	0.582*** (30.84)	0.264*** (12.86)
Observations	1,767	1,767	489	1,767	1,767
R-squared	0.035	0.004	0.012	0.039	0.032

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Firms Designated As 'Retailers'

VARIABLE	(1) Secure Loan Success	(2) Made Major Purchase	(3) Secured Investment Capital	(4) Recruit New Team Member	(5) Think More Strategically	(6) growbusiness
busplan	0.0562*** (3.44)	0.0517*** (3.38)	0.0370** (2.39)	0.0341** (2.00)	0.0555*** (3.31)	0.0507*** (2.85)
Constant	0.129*** (2.67)	0.0903** (2.00)	0.131*** (2.86)	0.213*** (4.24)	0.562*** (11.31)	0.240*** (4.55)
Observation	320	320	320	320	320	320
R-squared	0.036	0.035	0.018	0.012	0.033	0.025

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Firms Designated As 'Web-Based'

VARIABLES	(1) Secured Loan	(2) Made Major Purchase	(3) Secured Investment Capital	(4) Recruited New Team Member	(5) Think More Strategically	(6) Grew Business
Business Planning	0.0385*** (3.76)	0.0267** (2.47)	0.0645*** (5.62)	0.0326** (2.48)	0.0706*** (5.39)	0.0662*** (5.00)
Constant	0.0615** (2.25)	0.105*** (3.65)	0.0622** (2.03)	0.211*** (6.02)	0.548*** (15.70)	0.163*** (4.61)
Observations	489	489	489	489	489	489
R-squared	0.028	0.012	0.061	0.012	0.056	0.049

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 7: Firms Designated As 'Wholesalers'

VARIABLES	(1) Secured Loan	(2) Made Major Purchase	(3) Secured Investment Capital	(4) Recruited New Team Member	(5) Think More Strategically	(6) Grew Business
Business Planning	0.0460** (2.24)	0.0135 (0.74)	0.0597*** (2.87)	-0.00736 (-0.32)	0.0707*** (3.45)	0.0854*** (3.61)
Constant	0.123** (2.12)	0.134** (2.59)	0.106* (1.79)	0.356*** (5.41)	0.584*** (10.07)	0.247*** (3.68)
Observations	192	192	192	192	192	192
R-squared	0.026	0.003	0.041	0.001	0.059	0.064

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 8: Firms Less Than 7-Years Old

VARIABLES	(1) Secured Loan	(2) Made Major Purchase	(3) Secured Investment Capital	(4) Recruit New Team Member	(5) Think More Strategically	(6) Grew Business
Business Planning	0.0451*** (8.96)	0.0210*** (4.29)	0.0483*** (9.35)	0.0312*** (5.18)	0.0795*** (12.81)	0.0555*** (9.04)
Constant	0.0672*** (4.95)	0.103*** (7.81)	0.0718*** (5.15)	0.194*** (11.90)	0.507*** (30.28)	0.168*** (10.16)
Observations	2,083	2,083	2,083	2,083	2,083	2,083
R-squared	0.037	0.009	0.040	0.013	0.073	0.038

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 9: Firms Greater Than 7-Years Old

VARIABLES	(1) Secured Loan	(2) Made Major Purchase	(3) Secured Investment Capital	(4) Recruit New Team Member	(5) Think More Strategically	(6) Grew Business
Business Planning	0.0412*** (4.50)	0.0179*** (2.17)	0.0397*** (4.81)	0.0339*** (3.35)	0.0660*** (6.59)	0.0547*** (5.13)
Constant	0.136*** (4.95)	0.130*** (5.25)	0.0811*** (3.27)	0.241*** (7.91)	0.495*** (16.43)	0.401*** (12.51)
Observations	794	794	794	794	794	794
R-squared	0.025	0.006	0.028	0.014	0.052	0.032

t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1