



How Start-up Businesses View and Use Accounting in Early Year Operations

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Abstract

This research analyzes how start-up companies implement accounting in their early operations and if that use of accounting (or lack thereof) has played a role in acquiring funding. Prior research shows that the quality and existence of financial statements positively affects investing efficiency for companies in emerging markets (Chen et al., 2011). In this paper, we evaluate the hypothesis that start-ups using more extensive accounting practices receive more outside funding than their counterparts. This was tested with a 27-question survey broken into three sections: demographic, accounting use, and financial information. There were 44 participants. The typical start-up profile in this study is 5-6 years old, employs ten people, is affiliated with a start-up incubator, and identifies in the technology industry. Approximately 75% of participants reported using financial statements. Some participants feel strongly against using standard accounting practices, however, the majority of participants share a more favorable view. Results showed companies that use financial statements more often reported a higher percentage of debt and investment funding received than those who used financial statements less frequently or not at all. In conclusion, accounting helps start-ups communicate higher quality information to investors, thus leading to a better chance of receiving capital investment/debt financing. It is important to note that this sample selection was not chosen randomly and is not a statistical depiction of the entire population; start-up companies were directly targeted according to their company age and their affiliation with an incubator.

Keywords: accounting, start-up, financing, financial statements, debt lending

Introduction

Blank and Dorf, authors of *The Startup Owner's Manual – The Step-by-Step Guide for Building a Great Company*, define a startup as a temporary organization designed to be scalable, repeatable, and profitable (2012). In a highly competitive market, young businesses must work to maximize their limited resources in order to attract funding, grow, and, ultimately, turn a profit. One of the ways entrepreneurs can increase their chance of success is to seek residence in an incubator. These facilities help start-up companies by providing guidance and resources in the early stages of business development with the goal of graduating companies after a few years of

incubation. There are several incubators scattered across the southeastern United States, of which a handful are used in this report. Gainesville's own incubator, UF Innovate | The Hub, provides services such as mentorship, technology licensing, and R&D workshops to resident CEOs in order to "build, grow and support the spirit of entrepreneurship in North Central Florida – and the world!" (The Hub).

Previous research found that new businesses rely heavily on external debt in the form of loans and credit lines from banks, and that higher levels of debt are linked to faster growth in revenues and employment (Robb & Robinson, 2012). Additionally, another analysis reveals that the quality of financial statement reporting positively affects funding (Chen et al., 2011). The positive link between the quality of financial information and debt financing can be attributed to a "high degree of information asymmetry between the start-up firm and potential creditors due to the lack of a performance track record and a high degree of uncertainty about future performance" (Cole & Sokolyk, 2018). Information asymmetry refers to the imbalance of information between the company and the lender. A start-up may know its financial health but a bank must rely on financial documents provided. If none are provided, the bank does not have a sufficient basis on which to analyze the risk of lending to that entity.

A detailed record of a start-up company's finances in the form of financial statements can help a potential creditor understand the business' current operations and feel more confident engaging in debt lending with that entity. This external debt ultimately helps start-ups grow revenues and employment faster compared to those companies that do not receive that initial external debt funding. Based on the Kauffman Firm Surveys (KFS) in 2004, "companies using debt at start-up are significantly more likely to survive and achieve higher revenue" (Cole & Sokolyk, 2018). Companies using debt at start-up were compared to those who either were rejected by lenders or who did not apply for debt financing at all. The purpose of this research is to test whether the use of accounting affects the ease of obtaining debt lending or investment in start-up companies. We evaluate the hypothesis that companies using accounting practices more extensively receive more outside funding than their counterparts.

Methodology

This research utilized the survey method for collecting information using Qualtrics Survey Software to create and distribute the survey. Question formats varied and the best fit was chosen based on the subject of the question being asked (quantitative or qualitative). Short and long

answer question formats were avoided as much as possible in order to maintain consistency and comparability between responses. Once created, the survey was distributed via mass email to company contacts in several start-up incubators across the southeastern United States.

Forty-four start-up companies answered a twenty-seven question survey broken into three categories: demographic, implementation of accounting, and financial information. Business incubators were targeted in order to maximize response size due to the high volume of start-up companies in residence. However, it is important to note that results may be skewed due to the plenitude of resources available to resident companies compared to traditional, standalone start-up businesses.

Demographics

The purpose of the demographics section of the survey was to generate a profile of the “typical start-up company” to gain a better understanding of the characteristics start-ups share. This section includes questions regarding: incubator affiliation, location of current operations, years of operation, company size (measured by number of staff members), and industry of operation. Companies were allowed to select more than one industry of operation.

Implementation of Accounting

The purpose of the accounting section of the survey is to determine how start-up companies currently view and use accounting in their normal operations. This section contains four Likert scale statements on the importance of accounting in business. The Likert scale includes five options: completely disagree, somewhat disagree, neither agree nor disagree, somewhat agree, and completely agree.

The remaining questions were asked to collect information on accounting methods currently used. This section looked at overall company time spent on accounting, programs or people utilized (such as Quickbooks or a bookkeeper), the creation and usage of financial statements, and key performance indicators tracked. Those who indicated they create financial statements were shown three additional questions: a multiple choice regarding the method of creation, a drag-and-drop designed to rank the primary purpose of those financial statements, and a multiple choice to estimate the frequency of financial statement use in the past year.

Financial Information

There are two purposes for including the financial profile section of the survey: 1) to complete the profile of the “typical start-up company” and 2) to analyze the link between funding acquisition and accounting.

The financial profile was created with rough estimates of annual revenues, annual expenses, and equity investment. These questions aided in determining the size and health of the companies surveyed. A multiple-choice format was used for the annual revenues, annual expenses, and equity investments questions in order to maintain comparability between responses. Lastly, a “Prefer not to Answer” option was provided for each question due to the sensitive nature of these subjects to a developing business in a competitive industry.

The second purpose of the financial information section was to analyze the link between accounting and funding. Questions were designed to look at current funding goals, previous funding sources, founder’s versus non-founder’s equity funding, and difficulty obtaining funding. At the end of the section, the company chooses an option from 1 (very easy) to 10 (very difficult) that represents how difficult they feel it has been for them to obtain financing. Though subjective, the goal of this question is to compare the use of financing with the extent of the companies’ accounting and see if there is any correlation or link between the two subjects.

Results

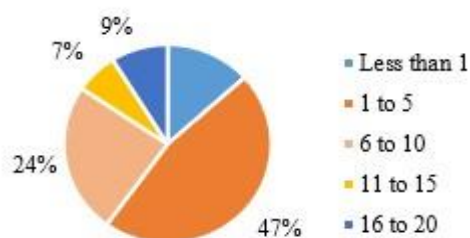


Figure 1. Company Age (in Years)

Demographics

The typical profile of a start-up company surveyed is on average five to six years old ($s = 5.22$), employs about ten people [6 full-time ($s = 8.43$), 3 part-time ($s = 6.88$), and 1 intern ($s = 2.70$)], and primarily identifies its industry as being in the technology sector. Additionally, about 85% of the surveyed companies indicated an affiliation with a business incubator.

Due to the affiliation with a business incubator, most of the start-ups targeted in this survey have a relatively similar age. Many incubators require basic operations to already be in place prior to admission. Once admitted into an incubator program, clients typically do stay *up to* five years before being asked to graduate to a more permanent place of residence (Long, 2019). This information stays consistent with the data as shown in Figure 1.

Table 1. Employee Distribution

Employee Status	Minimum	Maximum	Mean	Std Deviation (s)	Count
Full-time	0.00	50.00	5.86	8.43	44
Part-time	0.00	45.00	3.19	6.88	43
Intern	0.00	15.00	1.16	2.70	44

This study chose to measure company size by number of employee . Company size ranges from just one employee to an aggregate staff of sixty-three (combining full-time, part-time, and intern level employees). As shown in Table 1 above, the average sized company hosts about six full-time employees, three part-time employees, and one intern.

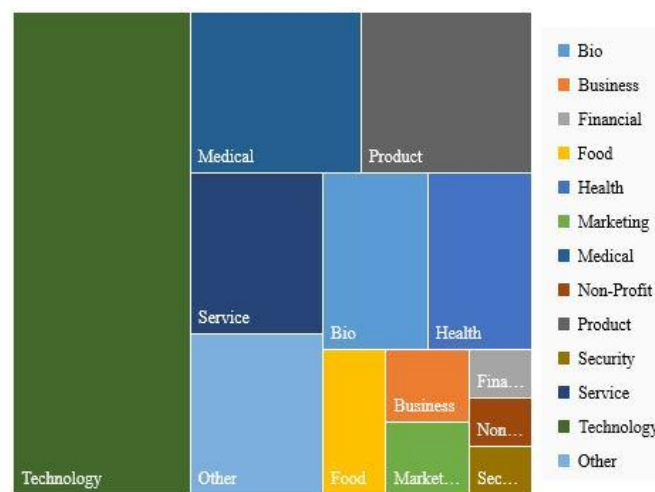


Figure 2. Treemap of industries selected by surveyed start-ups

When asked to identify one or more industry of operations, more than half of the surveyees indicated a presence in the technology sector with medical and product tied for second (see Figure 2 for all industries selected). “Other” industries listed were: defense, AI, manufacturing, mining, customer relationship management, agriculture, and veterinary.

Implementation of Accounting

The extent to which each company uses accounting in their operations varied considerably. One company indicated they spend up to ninety percent of each week on accounting work while

another reported just one percent of each week is delegated to accounting activities. On average companies reported spending about 15% of company time each week on accounting activities.

The preferred method used for start-up accounting is Quickbooks. Twenty-nine of the forty-four responses to this survey question reported using Quickbooks and approximately two-thirds of those used it in tandem with an accounting person or firm as displayed in Figure 3. “Other” notable methods mentioned were Xero, Wave App, Quicken, and Google Sheets.

When it comes to sentiment, the importance of accounting is viewed favorably. Table 2 illustrates the extent to which the surveyees agreed or disagreed with the pre-written Likert scale statements about accounting. As shown in the first statement, approximately 80% of the companies agreed to some extent that having an official accounting method is necessary to run their business effectively yet in the fourth statement only about 37% believe they currently use a sophisticated

Table 2. Sentiments Regarding Accounting					
Statement	Completely Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Completely Agree
Having an official accounting method is necessary for my business to run effectively.	5%	7.5%	7.5%	20%	60%
Tax compliance is the primary purpose of my accounting system.	17.5%	10%	10%	35%	27.5%
My company uses a sophisticated accounting system.	25%	12.5%	25%	12.5%	25%

accounting system themselves. The intended definition of “sophisticated” in this instance refers to a program that abides by standard accounting rules and guidelines. Forty percent of the start-ups surveyed reported using financial statements often or somewhat often in their day-to-day operations. This statement is researched further in the next section

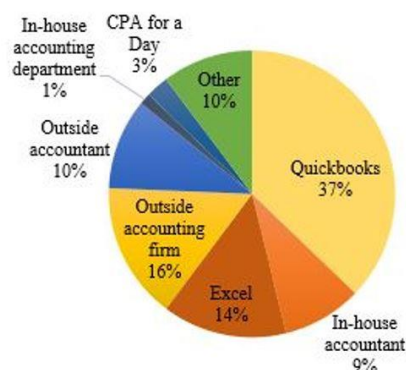


Figure 3. Accounting methods used in operations

financial statements. Financial statements were used and generated by about 75% of the companies surveyed. Of those that created financial statements, 64% used an automated program such as Quickbooks, 23% had them manually prepared by an accountant, and 13% indicated “Other” means. The disbursement of how frequently these companies reported using their financial statements is shown in Figure 4 below.

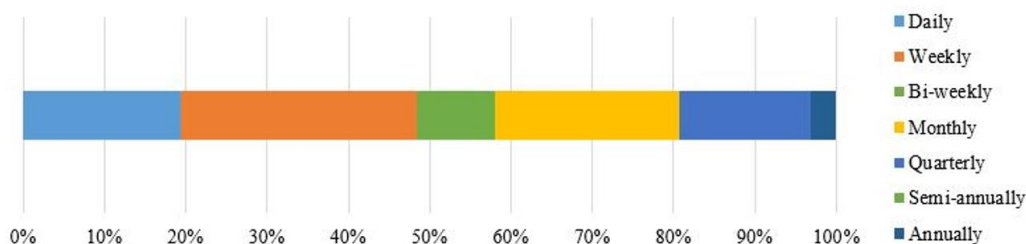


Figure 4. Frequency of financial statement use

The primary purpose for generating financial statements in this study is for “Internal Analysis” and “Conveying Information to Investors”. These are followed by “Acquiring Funding”, “Tax Compliance”, and lastly the least important, “Communicating to Customers.” See Table 3 below for data disbursements.

According to incubator management, nearly every company seeks additional funding at one time or another. The advisors for these companies always stress how important it is to have solid, reliable financial statements ready for inspection by prospective investors (Long, 2019). Given this information, the primary purpose for financial statements is somewhat divergent between management and clients. Management would expect start-up companies to primarily focus on acquiring funding, yet the data shows that clients use the financial statements more for internal analysis.

Financial statements are also used to track key performance indicators (KPIs). The distribution of those KPIs tracked is shown in Figure 5 above. Gainesville's incubator UF Innovate | The Hub asks clients to use accounting in regards to profit and loss data and projections (Long, 2019).

Table 3. Purpose for Using Financial Statements (1= most important, 5 = least important)

Purpose	1	2	3	4	5
Tax Compliance	10.3%	20.7%	24.2%	31.0%	13.8%
Communicating to Customers	0.0%	6.9%	6.9%	13.8%	72.4%
Acquiring Funding	6.9%	17.2%	38.0%	34.5%	3.4%
Conveying Information to Investors	13.8%	44.9%	17.2%	13.8%	10.3%
Internal Analysis	69.0%	10.3%	13.8%	6.9%	0.0%

Table 4. Annual Revenues

Revenue Buckets	Number of Start-ups	Percentage
No revenue	6	20%
<\$500k	16	53%
\$500k - \$1M	3	10%
\$1M - \$5M	5	17%
Prefer not to answer	14	

Table 5. Annual R&D Expenses

Expense Buckets	Number of Start-ups	Percentage
No expense	2	7%
\$0 - \$100k	13	43%
\$100k - \$500k	11	37%
\$500k - \$1M	1	3%
\$1M - \$5M	2	7%
>\$5M	1	3%
Prefer not to answer	14	

Table 6. Equity Investment to Date

Equity Investment Buckets	Number of Start-ups	Percentage
None	15	48%
<\$500k	7	23%
\$500k - \$1M	1	3%
\$1M - \$5M	6	19%
\$5M - \$10M	1	3%
>\$10M	1	3%
Prefer not to answer	13	

Tables 4 and 5 illustrate the financial profile of the start-up companies surveyed in terms of annual revenues and R&D expenses. Of the 30 who volunteered their information for these questions, nearly three-quarters of participants earned less than \$500,000 a year in revenue and spent less than \$500,000 in R&D expenses. In addition to employee numbers, these numbers are another indicator of average company size.

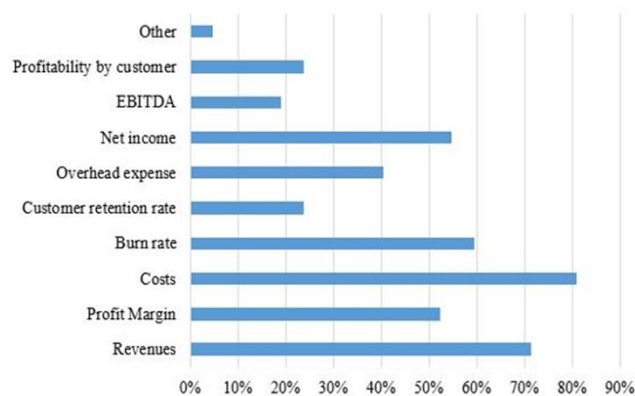
**Figure 5.** KPIs Tracked by Start-ups

Table 6 illustrates the amount of equity investment to date. On average, the percent of equity investment from the founders is about 65%. The other 35% comes from non-founder sources. This analysis separated outside sources into three buckets: debt, investment, and grants. “Debt” includes both debt and line of credit; “Investment” includes angel, VC, corporate, and public investments; and “Grants” include SBIR, STTR, government research, NGO, and government agency grants. Though included as options, founder’s financing and family and friends were not included in any of the buckets because this analysis is for only looking for correlations in companies with external funding.

Figure 6 shows the disbursement of the estimated difficulty reported as it pertains to obtaining financing. The average rating fell within the 5-6 range regardless of accounting practices or views. No significant correlation was found in connection to the accounting questions. The data does, however, show a positively-skewed bell curve with a mean of 5.58, a median of 5.50, and a mode of 5.00. This may suggest that start-up companies find it slightly more difficult to obtain funding.

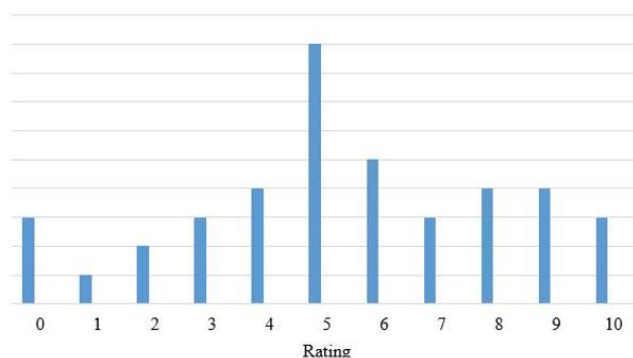


Figure 6. Difficulty obtaining financing (1=easy, 10=difficult)

Analysis

The frequency of financial statement use is correlated with the type of funding sources received. This finding is consistent with previous research.

First, companies were split into two major groups: those who create financial statements (Group 1) and those who do not (Group 2). Of Group 1, a higher percentage of companies indicated previously receiving debt and investments compared to those in Group 2. Conversely, Group 2 showed a higher percentage of previously receiving grant funding compared to Group 1. See Table 7 below.

Table 7. Funding vs. Financial Statement Use

Groups	Debt	Investment	Grants	Count
Group 1	30%	43%	23%	30
Group 2	13%	0%	38%	10
No answer				4

Secondly, Group 1 was separated even further into three categories based on frequency of financial statement use (see Table 8). The “high frequency” group includes those that selected daily, weekly, or bi-weekly use. The “medium frequency” group includes those that selected monthly and quarterly use. And the “low frequency” group includes those who selected semi-annual and annual use; however, only one company falls into this category. The results reveal that the higher the frequency of financial statement use, the higher the likelihood of debt and investment financing. The results are economically significant although not statistically significant due to low power ($p\text{-values} > 0.10$).

Table 8. Funding vs. Frequency of Financial Statement Use

Frequency	Debt	Investment	Grants	Count
High	31%	50%	6%	16
Medium	25%	42%	42%	12
Low	0%	0%	100%	1
No answer				1

Conclusion

This study furthers research on sources of start-up funding by looking at use of accounting in early years of operation. Due to the specialized nature of some incubators, a largely mixed industry audience was deliberately chosen in order to make this a more representative analysis of the start-up population as a whole. Start-up funding comes from internal sources such as the founder, family, and friends, or from external sources such as debt lending, investment, and grants. This study chooses to focus on the correlations between accounting and external sources of funding. While good accounting can be linked to company success, it is arguably even more important to note that a lack of foundational accounting can cause serious problems due to a lack of cash flow. In the data analysis, this study finds that frequent financial statement use may lead to higher debt and investment funding, which has been linked to start-up success. Previous research in this field attributes this to information asymmetry, or an imbalance of information, between start-ups and lenders. Accounting acts as a bridge between the two entities in order to communicate financial information from the start-up company to the debt lending entity. A further study might be conducted from a banking point-of-view to find out what debt lenders look for in start-up companies and how they decide if an investment is worth the risk.

Limitations

This sample was not selected using statistical sampling and therefore, cannot be representative of the entire start-up population. Additionally, since incubators were targeted for responses, this study incorporates many companies with access to more resources than stand-alone start-ups. This may influence the results, especially surrounding access to funding sources. Lastly, as survey questions were not mandatory, some companies did not complete the survey in its entirety which decreased the number of responses per question towards the end of the survey.

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