**Management Accounting Reports in Small Businesses: Frequency of Use and Influence of Owner Locus of Control and Goals**

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Biographical

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Abstract

This study examined small business use of management accounting reports available in QuickBooks® accounting software. Results from a sample of 128 small businesses, predominantly microbusinesses, reveal that the use of most reports is relatively infrequent. Findings support the hypotheses that business owner personal attributes of an internal locus of control and the goal of attaining intrinsic rewards are significant predictors of report use. Implications of the findings for practice and QuickBooks training are discussed.

The benefits of software to maintain business accounts over paper ledgers are enormous. Software provides ease of use, backup, ready information search, secure storage and replication of records, and more (Goldberg, 2010). QuickBooks® is one of the most widely employed small business accounting software programs. It enables its users to organize all of their financial records in one location so that the financial and managerial accounting activities of the business are centralized. Small business tasks that range from paying bills to tracking sales by customer to business planning are supported and facilitated.

Despite the popularity of QuickBooks accounting software, the extent to which it is employed in small businesses to perform a spectrum of management accounting tasks (e.g., to monitor profitability) is largely unknown. These management accounting tasks stand apart from financial accounting tasks (e.g., recording the payment of invoices) because they help small business owners accomplish the fundamental goals of the business, such as to attain profitability. One of the ways management accounting supports the goals of a business is by supplying information for decision-making in the form of reports. QuickBooks software offers a pull down menu of reports that can be used for management accounting.

Because the frequency of external reporting (e.g., to obtain a loan from a bank) is episodic with long cycle times in between, the predominant purpose of QuickBooks reports is for managerial accounting. Evidence on use of QuickBooks reports to manage accounts receivable, just one element of management accounting, has shown that higher use lowers outstanding balances (Shields and Shelleman, 2010), suggesting that small businesses that use the program for managerial purposes reap benefits. Aside from the cited study, there is little evidence on the use of QuickBooks reports. To what extent are they used in small businesses and why do some small business owners use reports more than others?

This study offers empirical evidence on small businesses' use of QuickBooks software for management accounting reporting. Specifically, the research examines the extent to which business owners monitor a broad range of management accounting reports available in the QuickBooks report menu. The study also seeks to understand predictors of report use by testing hypotheses that examine the effects of owners' personal attributes, locus of control and goals, on their frequency of report use.

Three questions guided the research. First, do small businesses use the reports in the report menu of QuickBooks? Second, if so, how frequently do they use these reports? Finally, do the personal attributes of small business owners' influence their use of these management accounting reports?

Findings will be useful to small business counselors by enabling them to see the extent to which small business owners are taking advantage of the important benefits of accounting software. This would enable greater targeting of training to address gaps in use, as will expanded knowledge of user characteristics. It is expected that small business owners will also find the results directly useful to benchmark their efforts with fellow business owners, as well as the benefits owners would experience by enhanced QuickBooks training offered by business counselors.

In the following section of this paper, we briefly examine the literature on QuickBooks software, relevant management accounting issues for small businesses, and personal attributes of small business owners that may be associated with QuickBooks use. We then explain the methodology employed for the study and our results. Finally, we conclude with a discussion of our findings, including their implications for practice.

## Review of the Literature

In this section, we review literature on QuickBooks software, relevant management accounting issues for small businesses, and personal attributes of small business owners that are likely to be associated with QuickBooks use.

### QuickBooks Software

A majority of small businesses employ the QuickBooks accounting software program. In fact, its market share is reported to be 93% of the retail market in unit sales (Intuit, 2011). The software program has many useful features for small businesses that, if employed, can aid small business owners in performing important management accounting responsibilities. Convenient and relatively low cost, it facilitates recording transactions for record keeping. Transactions include items such as purchases, sales, payments, collections, and the like. These items provide data to generate management accounting information to manage the business.

QuickBooks has a report menu which lists categories of reports. The report menu enables a small business to conveniently create and access management accounting reports which present the effects of transactions on company financials, customers and receivables, purchases, and vendors and payables. QuickBooks facilitates planning and control decisions through the use of reports (e.g., profitability year-to-date, actual to budget comparisons, list of accounts and their respective balances).

QuickBooks can be used by small businesses to both plan and control their business. A menu of reports allows managers to readily view reports on financial statements, customers and receivables, budgets, lists of accounts and items, purchases, and vendors and payables. Frequent consultation of these reports is important to small business management because it allows a small business owner to plan, monitor, and get timely feedback and thus to make more timely interventions.

Even though QuickBooks is widely used in small businesses, there is remarkably little empirical evidence available on the extent of its use or factors that influence its use. Several studies have examined the choice of accounting software (Bressler and Bressler, 2006; Davis and Dunn, 2005). Advice from a professional is the only known reason underlying selection of a program: recommendation by a business counselor was ranked first in one study (Bressler and Bressler, 2006) and advice from a Certified Public Accountant (CPA) was first in another (Davis and Dunn, 2005). One half (54%) (Bressler and Bressler, 2006) to nearly 9 out of ten (89%) (Davis and Dunn, 2005) users report high levels of satisfaction with their software. What's more significant is that greater use of the few QuickBooks reports on accounts receivable has been linked to lower accounts receivables balances (Shields and Shelleman, 2010), confirming the benefits of the management accounting report function to the bottom line. But, despite widespread use of the program, reported satisfaction, and results that suggest its value, there is no other known empirical evidence with regard to the factors underlying or the extent of the use of the vast majority of QuickBooks reports for the management of small businesses.

**Small Business Management Accounting**

Management accounting information includes both financial and nonfinancial information that provides assistance to managers in making decisions (Garrison, Noreen and Brewer, 2010; Horngren, Datar, Foster, Rajan, and Ittner, 2009). Management accounting information is used for both planning and control. Planning involves selecting a measure of performance (e.g., sales revenue) and selecting a goal (e.g., budgeted sales revenue) with its aspired level over some specified period of time (Garrison, Noreen, and Brewer, 2010; Horngren et al., 2009). Control involves taking steps to insure that the goal is achieved (Garrison, Noreen, and Brewer, 2010; Horngren et al., 2009). The control process involves monitoring and evaluating actual performance on the specific performance measure relative to the budgeted goal for that measure (Anthony and Govindarajan, 2006). If actual performance on the measure is not on track to the goal, then a manager must either intervene or change the level of the aspired goal (Anthony and Govindarajan, 2006). At the end of the specified time period, a comparison of actual to budgeted levels of the performance measure is made and the feedback is used during the next cycle of planning (Anthony and Govindarajan, 2006).

The vast majority of the research on the use of accounting in organizations has been focused on large firms. There is little evidence on how small businesses use accounting information in general to manage the business and even less on the use of management accounting information. Management accounting information is intended for use by managers whereas financial accounting information (e.g., an income statement in generally accepted accounting principles, GAAP, format) is intended for use by external users such as investors. Financial accounting information does not provide sufficient information for small business owners to manage their business using forward looking, detailed, and economically relevant information (e.g., budgeted cost, breakeven, etc.). This type of information is necessary to run a business efficiently and effectively.

There are only a few known published studies that have examined the use of financial accounting information by small businesses. Holmes and Des Nichols (1988) found that the annual use of balance sheets, cash flow statements, and profit and loss statements, is positively associated with demographics such as business age, and size, industry, and the level of education of the owner/manager. McMahon (2001) reported evidence that comprehensive financial reporting (e.g., use of balance sheet, cash flow statements, and profit and loss statements) was positively associated with higher annual sales revenue and sales growth. Neither of these studies examined the use of management accounting information in managing small businesses.

**Personal Attributes of Small Business Owners**

Locus of control is one of the most widely studied personality constructs in the psychological literature. As a construct related to bringing about change, locus of control is relevant within the context of understanding goal directed behavior (Lefcourt, 1992), such as that engaged in by entrepreneurs and small business owners seeking to bring to life and sustain an economic enterprise. With its origins in social learning theory, locus of control refers to the degree to which people think that they can exercise control over the events that influence them. Rotter (1966) delineated both an external and an internal locus of control.

External locus of control individuals, sometimes called “externalizers”, believe that they do not have direct control over their circumstance and outcomes. They see themselves in a relatively passive role with respect to the external environment; their fate is perceived to be in the hands of other people, luck, or even fate.

In contrast, individuals with an internal locus of control, sometimes called “internalizers”, believe that they have control over their circumstance and outcomes. Active, rather than passive in orientation, they see a direct link between their actions and their outcomes. Internal locus of control individuals have been found to set more difficult goals than external locus of control individuals, which is an indicator of a stronger motivation to obtain desired outcomes (Ng, Sorenson, and Eby, 2006; Yukl and Latham, 1978).

In an early review of the locus of control literature, Jennings and Zeithamel (1983) noted its promise for the study of entrepreneurial activity. According to Ward (1993, p. 33), locus of control can be seen as “a potential determinant of whether or not a person involved with a small business is aware of and seeking opportunities overlooked by others within a given economic environment.” His study of small business expansion plans showed that even in the face of poor economic conditions, an internal locus of control business manager engaged in growth planning, an opportunity seeking behavior. What's more, founders of the business were significantly more likely to have an internal locus of control than were small business managers (Ward, 1993). Internal locus of control is significantly related to entrepreneurs' need for achievement and degree of innovativeness (Kumbul Guler and Tinar, 2009). In fact, Boone, De Brabander, and Van Witteloostuijn (1996) demonstrated that, in somewhat larger firms, Chief Executive Officers' internal locus of control was a predictor of organizational success regardless of the choice of competitive strategy.

Because locus of control is a variable which may predict a propensity to exercise persistent control over the external environment (Ng, Sorenson, and Eby, 2006; Spector, 1982), we expect that internal locus of control small business owners would be more active users of the reports from the reports menu in QuickBooks. By examining QuickBooks reports, small business owners are poised to take actions that make changes in their business strategy. A business owner who is oriented to taking action would logically be expected to seek out relevant information for guidance.

H 1: The extent to which small business owners have an internal locus of control will be positively related to the frequency with which they use QuickBooks management accounting reports.

Goals represent aims that people strive toward. They have a long history in the study of management, ranging from Frederick Taylor's standard outputs to the modern Balanced Scorecard. Research supports the notion that goals are an important source of motivation that enables people to achieve their desired performance outcomes (Kreitner and Kinicki, 2007). Goals have the effects of directing people's attention, stimulating an expenditure of effort, raising the level of persistence, and fostering the development of action plans to accomplish tasks (Locke, Shaw, Saari, and Latham, 1981).

As such, they assist small business owners and entrepreneurs, who found and work at businesses in order to achieve their desired goals.

A variety of theoretical frameworks and studies have explored the goals that motivate entrepreneurs (e.g., Bird, 1989, Aronoff and Ward, 1995). Naffziger, Hornsby, and Kuratko (1994) gave prominence to the owner's goals in their model of entrepreneurial motivation, recognizing that motivations of business owners encompass personal as well as firm-related outcomes of the business. Personally meaningful goals are important to help owners stay motivated post-startup, when the business creates ongoing challenges. Entrepreneurs have goals related to extrinsic rewards, independence/autonomy, intrinsic rewards, and family security (Kuratko, Hornsby and Naffziger, 1997) that continue to drive their behavior. Lifestyle goals are more important than financial goals to many business owners (Walker and Brown, 2004).

Because of the importance of the owner's goals in providing motivation to develop and maintain a successful business, we expected that the strength of his or her goals would influence the extent to which a business owner uses the QuickBooks reports. By this reasoning, the use of QuickBooks reports for planning and control would be instrumental behaviors to help achieve the owner's goals through the business. The use of QuickBooks reports allows small business owners to plan and monitor the performance of their business. Thus, they provide information on the effects of the business owner's actions on the business and consequently on the owner's effectiveness at achieving his or her goals.

H2: The strength of the goals of small business owners will be positively related to the frequency with which they use QuickBooks management accounting reports.

## Methods

### Sample

The 128 small business owners who provided the data for this study were from a list of clients of the Small Business Development Center (SBDC) of a northeastern state in the United States. All had recently attended QuickBooks training classes and reported using QuickBooks software for an average of five and half years. Most have completed only one training session. The majority of respondents are female (73%), with a mean age between 46 and 55 years old.

Four hundred and sixty-one surveys were mailed using the Dillman methodology (2009) that included a pre-letter, the questionnaire, a postcard reminder, and a subsequent replacement survey. Questionnaires were returned directly to the SBDC rather than the researchers and respondents were assured of confidentiality. One hundred and twenty eight surveys were returned, a 28% rate of response.

Microbusinesses comprise the majority of the sample. Over a third (38%) of respondents reported no employees and almost half (46%) reported only 2 to 5 employees. The number of employees for the remainder of the sample businesses are 6 to 10 (7%), 11 to 15 (7%), and 16 to 30 (3%). Nearly half (45%) of the sample businesses are service businesses, 13% are manufacturing, 12% are retail, 11% are construction, 8% are a combination, and 4 % are wholesale businesses. Another 7 % of respondents selected "Other" as their business type. Reported mean annual sales are $294,403.

**Measures**

During development of the measures, several Small Business Development Center (SBDC) counselors who conduct QuickBooks training provided feedback which was incorporated into the questionnaire.

The dependent variable Frequency of QuickBooks Report Use was measured by asking respondents to respond to sets of questions concerning primary menu headings in the reports menu in QuickBooks. Headings were Company Financials, Customer and Receivables, Budgets and Forecasts, Lists, Purchases, and Vendors and Payables. The stem of each section was, "How frequently do you use reports that are listed under the menu heading ______?" Because of the rarity of external financial reporting and that of 21 reports only two have a dual financial and managerial purpose (i.e., Balance Sheet and Statement of Cash Flows), the primary role of the QuickBooks reports that were examined was assumed to be for managerial accounting.

The reports under the heading Company Financials were Profit and Loss Year to Date (YTD), Profit and Loss by Class, Income by Customer, Balance Sheet, Statement of Cash Flows, Cash Flow Forecast. The reports under Customer and Receivables were Aging of Accounts Receivable, Customer Balance, Open Invoices, Transactions by Customer, and Sales by Customer. The reports under the heading Budgets and Forecasts were Budget to Actual. The items under the heading Lists were Chart of Accounts, Items, Price Level, Vendor. The reports under the heading Purchases were By Vendor, By Items. The reports under Vendors and Payables were Aging of Accounts Payable, Vendor Balance, Unpaid Bills. Respondents were asked to respond to seven point Likert-type scales, with response categories ranging from Never to Daily. At the beginning of the section, respondents were instructed to respond with the values 1=never or rarely, 2 =annually, 3=semi-annually, 4 = quarterly, 5=monthly, 6=weekly, and 7=daily.

The independent variable Internal Locus of Control was measured using a brief Internal Locus of Control scale based on one developed by Lumpkin (1985) for use in survey research. The three items were, “When I make plans, I am almost certain that I can make them work”; “Getting people to do the right things depends on ability; luck has nothing to do with it”, and “What happens is my doing”. Five point Likert-type scales were employed, with response categories ranging from Strongly Disagree (1) to Strongly Agree (5). The scale had an acceptable Cronbach’s alpha (.73).

The independent variable Goals was measured using items adapted from a measure of goals used by Kuratko, Hornsby, and Naffziger (1997). The stem was, “The following items address goals that you might hope to achieve through your business. Please rate their relevance to you”. Seven point Likert-type scales were employed, with response categories ranging from Relevant (7) to Not Relevant (1). Responses were factor analyzed using Principle Components with Oblimin rotation to examine common variance after eliminating items that did not have acceptable inter-item correlations ($p < 0.30$). A three-factor solution explaining 84 percent of the variance emerged. The three resulting scales measure extrinsic rewards, independence, and intrinsic rewards. The scale Extrinsic Rewards (Eigenvalue = 1.77, Cronbach's alpha = .88) consisted of the items: “Acquire personal wealth”, “To increase my personal income”, and “To increase my income opportunities”. The scale Independence (Eigenvalue = 4.43, Cronbach's alpha = .95) consisted of the items: “Maintain my personal freedom”, “Self employment”, "To be my own boss” and “To control my own employment destiny”. The scale Intrinsic Rewards (Eigenvalue = 1.40, Cronbach's alpha = .74) consisted of the items: “Gain public recognition” and “Enjoy the excitement”.

**Analysis and Results**

The first two research questions dealt with use and frequency of use of the management accounting reports, respectively. As shown in Table 1, the mean value for use of the different reports ranges from 4.19 to 1.75. For 18 of the 21 reports examined, the mode was 1 (rarely or never). Table 2 shows the means ranked in descending order. The top ten reports used were Profit and Loss YTD followed by the Chart of Accounts, Balance Sheet, Vendors, Items, Open Invoices, Transactions by Customers, Sales by Customers, Customer Balance, and Income by Customer.

(See Appendix Tables 1 & 2)

The third research question addressed whether the personal attributes of small business owners' influence their use of the management accounting reports. The hypotheses on the effects of the independent variables Internal Locus of Control and Goals on the dependent variable Use of Reports were examined using stepwise regression analysis. Reports with a median usage frequency greater than three were the dependent variables in the analysis. Thus the analysis focused only on reports used semi annually or more frequently and included the top ten most frequently used reports. Internal Locus of Control, Extrinsic Rewards, Independence, and Intrinsic Rewards were the independent variables in the regression model.

A model with the independent variables Internal Locus of Control, Extrinsic Rewards, Independence, and Intrinsic Rewards significantly predicted the use of the QuickBooks report Profit and Loss YTD ($F$=5.70, $p$=.02) with an adjusted $R^2$ of .06 (see Table 3, panel A). The regression coefficient for Internal Locus of Control is significant and positive ($b$=0.05, $t$=2.39, $p$=.02). The model with Internal Locus of Control, Extrinsic Rewards, Independence, and Intrinsic Rewards also is a significant predictor of the use of the Chart of Accounts ($F$=9.32, $p$=.00) with an adjusted $R^2$ of .10 (see Table 3, panel B). The regression coefficient for Internal Locus of Control is significant and positive ($b$=0.34,$t$=3.05,$p$=.00). The model significantly predicts of the QuickBooks report Balance Sheet ($F$=4.21, $p$=.04) with an adjusted $R^2$ of .04 (see Table 3, panel C). The regression coefficient for Intrinsic Rewards is significant and positive ($b$=0.23, $t$=2.05, $p$=.04). The model is not a significant predictor of the use of the QuickBooks reports Vendors, Items, Open Invoice, Transactions by Customer, Sales by Customer, Customer Balance, and Income by Customer.

(See Appendix Table 3)

**Discussion**

The results from this research provide evidence that small businesses do use the QuickBooks management accounting reports. However, examination of frequency of use in this sample of very small businesses shows that only half (50%) of the reports are used more than twice a year while the other half (50%) are either not used at all or are used less than twice a year. It may be that many microbusiness owners fail to recognize the value to their business of using QuickBooks with a managerial purpose or that, as small operations, they perceive a lack of time to invest in management accounting.

The Profit and Loss YTD report is used most often, followed by the reports Chart of Accounts and Balance Sheet. All three of these reports provide users with the ability to monitor the business by providing an overview in some form of the expense, revenue, asset, liability and equity accounts. In short, the reports provide feedback about the general state of the business over a specific period of time. They facilitate management by allowing a business owner to search for and detect account balances or line items that differ from expected values. The owner can then investigate and take corrective action if necessary.

This study provides evidence that supports the hypothesis that the personal attribute locus of control influences small business owners' use of the QuickBooks management accounting reports. The independent variable internal locus of control is a significant predictor of the use of the reports Profit and Loss YTD and Chart of Accounts. The Profit and Loss YTD report allows a small business owner to monitor the status of the business with regard to overall profitability and also specific revenue and expense line items. A business owner with an internal locus of control gains feedback from this report about his or her actions that potentially affect profit, expenses, and revenues over a specified period of time. Similarly, the QuickBooks report Chart of Accounts provides a list of all accounts along with their current balances. This report enables the monitoring of all asset, liability, equity, expense and income account balances. For the business owner with a high internal locus of control, it provides desirable feedback on how his or her actions are affecting the business.

This study provides evidence supporting the hypothesis that the personal attribute business owner goals influences small business owners' use of the QuickBooks management accounting reports. Owners who hold the goal of intrinsic rewards more strongly use the Balance Sheet report more frequently. The balance sheet shows the net value of the business and thus can provide an owner with the intrinsic reward of seeing the net worth of his or her business increase over time.

**Practical Implications**

The results of this research have implications for small businesses and QuickBooks software training. Many valuable management accounting reports that can be employed to help manage the business are never or only rarely consulted. For example, reports such as Price Level can be useful in reviewing the discounts that a business is offering specific customers or segments of customers. Review allows the business owner to ensure that discounts primarily are being allocated to high volume rather than low volume customers. The report Sales by Customer would be a complementary report to this review process. Another useful report rarely used is Vendor. It can highlight the small business's purchasing power or leverage with a vendor that might warrant taking action to negotiate a discount. Profit and Loss by Class is rarely or never used to isolate profitable segments of the business either by customers or by items. The class feature of QuickBooks allows for in-depth investigation to isolate and view subcategories or segments by profitability or revenue that could indicate products or services to drop, retain, or expand.

Evidence from this study implies that there is much work to be done to convince owners to more fully take advantage of the capabilities inherent in QuickBooks for managing their small businesses. Combined with the infrequent use of most reports, nearly all the respondents indicate that they have completed only one training session. Currently, they are missing out on many of the benefits of management accounting. Formal training and individual counseling are the primary ways to influence and heighten their awareness.

Both across the board and especially when small business owners have an external rather than an internal locus of control, additional efforts during training sessions may be needed to convince them of the utility of reports and to motivate them to use available QuickBooks reports to manage their business. An appeal to intrinsic rewards associated with small business ownership might be an effective motivational device.

**Limitations**

The results of this study are of course limited by its sample and measures. Results could vary among a more gender-balanced sample that includes owners of businesses that have greater numbers of employees and higher annual sales. The sample also represents only one geographic region. Respondents' training on QuickBooks was limited. Follow-up with in-depth interviews could shed more insight into reasons behind infrequent use of QuickBooks reports.

**Conclusions**

This study provides the first known evidence on the relative infrequency with which small business owners use a wide range of management accounting reports available in QuickBooks. Our results imply that small business owners are not widely utilizing the management accounting tools available to them in the QuickBooks software and, therefore, that they are forgoing opportunities to improve the profitability of their businesses. Simultaneously, there are opportunities for business counselors to target training to address the need by taking into account personal attributes of business owners.

**Apendix**

**Appendix Table 1**
**Statistics for the Independent and Dependent Variables**

| Variable | Actual Range | Mean | Mode | Standard Deviation |
|---|---|---|---|---|
| Profit YTD | 1.00 – 7.00 | 4.19 | 4.00 | 1.46 |
| Profit and Loss by Class | 1.00 – 7.00 | 2.47 | 1.00 | 1.69 |
| Income by Customer | 1.00 – 7.00 | 3.06 | 1.00 | 1.97 |
| Balance Sheet | 1.00 – 7.00 | 3.68 | 5.00 | 1.66 |
| Statement of Cash Flows | 1.00 – 7.00 | 2.66 | 1.00 | 1.79 |
| Cash Flow Forecast | 1.00 – 7.00 | 1.94 | 1.00 | 1.53 |
| Aging of AR Report | 1.00 – 7.00 | 2.73 | 1.00 | 2.09 |
| Customer Balance Report | 1.00 – 7.00 | 3.09 | 1.00 | 2.07 |
| Open Invoices | 1.00 – 7.00 | 3.00 | 1.00 | 2.19 |
| Customer Transactions Report | 1.00 – 7.00 | 3.21 | 1.00 | 2.17 |
| Sales by Customer | 1.00 – 7.00 | 3.10 | 1.00 | 2.22 |
| Budget to Actual | 1.00 – 6.00 | 1.75 | 1.00 | 1.51 |
| Chart of Accounts | 1.00 – 7.00 | 3.89 | 4.00 | 2.05 |
| Items | 1.00 – 7.00 | 3.37 | 1.00 | 2.32 |
| Price Level | 1.00 – 7.00 | 1.94 | 1.00 | 1.71 |
| Vendor | 1.00 – 7.00 | 3.62 | 1.00 | 2.28 |
| By Vendor | 1.00 – 7.00 | 2.37 | 1.00 | 1.92 |
| By Item | 1.00 – 7.00 | 2.01 | 1.00 | 1.72 |
| Aging of AP | 1.00 – 7.00 | 2.45 | 1.00 | 2.09 |
| Vendor Balance | 1.00 – 7.00 | 2.44 | 1.00 | 2.05 |
| Unpaid Bills | 1.00 – 7.00 | 2.76 | 1.00 | 2.18 |
| Internal Locus of Control | 1.00 – 5.00 | 3.77 | 4.00 | 0.82 |
| Extrinsic Reward Goals | 1.00 – 7.00 | 3.04 | 2.00 | 1.69 |
| Independence Goals | 1.00 – 7.00 | 2.28 | 1.00 | 1.79 |
| Intrinsic Reward Goals | 1.00 – 7.00 | 3.51 | 1.00 | 1.85 |

**Appendix Table 2**

**Rank Order of Means**

| | |
|---|---|
| Profit & Loss YTD | 4.19 |
| Chart of Accounts | 3.89 |
| Balance Sheet | 3.68 |
| Vendors | 3.62 |
| Items | 3.37 |
| Open Invoice | 3.32 |
| Transactions by Customer | 3.21 |
| Sales by Customer | 3.10 |
| Customer Balance | 3.09 |
| Income by Customer | 3.06 |
| Aging of Accounts Receivable | 2.79 |
| Unpaid Bills | 2.76 |
| Statement of Cash Flows | 2.66 |
| Profit and Loss by Class | 2.47 |
| Aging of Accounts Payable | 2.45 |
| Vendor Balance | 2.44 |
| By Vendor | 2.37 |
| By Item | 2.01 |
| Price Level | 1.94 |
| Cash Flow Forecast | 1.94 |
| Budget to Actual | 1.75 |

**Appendix Table 3**
**Regression Analyses**
**Dependent Variable: Frequency of QuickBooks Report Use**

**Panel A: Profit and Loss YTD**

| Independent Variables | Regression Coefficient | *t* for Variable | *F* for Equation | Total Adj $R^2$ | Condition Index |
|---|---|---|---|---|---|
| Internal Locus of Control | 0.50 | 2.39** | 5.70** | .06 | 1.00 |
| Extrinsic Reward Goals | 0.17 | 1.51 | | | 1.00 |
| Independence Goals | 0.11 | 0.98 | | | 1.00 |
| Intrinsic Reward Goals | -0.13 | - 1.08 | | | 1.04 |

**Panel B: Chart of Accounts**

| Independent Variables | Regression Coefficient | *t* for Variable | *F* for Equation | Total Adj $R^2$ | Condition Index |
|---|---|---|---|---|---|
| Internal Locus of Control | 0.34 | 3.05*** | 9.32*** | .10 | 1.00 |
| Extrinsic Reward Goals | 0.03 | 0.30 | | | 1.01 |
| Independence Goals | - 0.03 | - 0.28 | | | 1.01 |
| Intrinsic Reward Goals | 0.01 | 0.0 | | | 1.04 |

**Panel C: Balance Sheet**

| Independent Variables | Regression Coefficient | *t* for Variable | *F* for Equation | Total Adj $R^2$ | Condition Index |
|---|---|---|---|---|---|
| Internal Locus of Control | 0.13 | 1.13 | 4.21** | .04 | 1.04 |
| Extrinsic Reward Goals | 0.12 | 1.02 | | | 1.01 |
| Independence Goals | 0.01 | 0.06 | | | 1.09 |
| Intrinsic Reward Goals | 0.23 | 2.05** | | | 1.00 |

***Level of significance*** $^{***} = \leq .01$; $^{**} = \leq .05$; ***and*** $^{*} = \leq .10$

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