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Measuring and managing customer profitability: Implications for identifying and managing unprofitable customers

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“Measuring and Managing Customer Profitability: Implications for Identifying and Managing Unprofitable Customers”

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Business Administration
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Although she was not formally part of my dissertation committee, Dr. Grace Lemmon also deserves a big thanks for helping me with the Institutional Review Board requirements and learning the basics of Qualtrics to complete my dissertation. Even before I began my dissertation, Dr. Lemmon taught Statistics and how to use SPSS software to me and all DBA students in their first year of the program. All the faculty in DePaul's DBA program are outstanding. However, Dr. Lemmon stands out as she answers more student emails, phone calls, and requests for help than any faculty member I have encountered as a student in my Bachelors, Masters, or Doctoral program. I know my classmates will agree with me, that Dr. Lemmon is ultimately behind the success of many students in DePaul's DBA program.

Biography

David (Dave) Stubing grew up in Urbana, Illinois, where the University of Illinois is located. That is where he caught the higher education bug. After graduating from Illinois State University in 1986, Dave began his career in Minneapolis-St. Paul, Minnesota. Dave lived in the Twin Cities until 1997, when he moved to Vancouver, Washington. During his corporate career, Dave worked as a CFO/Controller for small to mid-sized corporations, as well as an Accounting Software Consultant. Dave evolved into the Accountant who was the first Controller or CFO at small, growing companies, and built a business' Accounting & Finance function from scratch, giving the organization the foundation to grow to the next level and higher.

Dave began his academic career in 2010. His first university teaching job was to teach Finance courses at Western Oregon University in Monmouth, Oregon. Dave drove 80 miles from his home in Vancouver to Monmouth and back, twice a week to begin his academic career. Over time, he was asked to teach Accounting courses at four different Portland area universities. Eventually he took a full-time position at the Vancouver campus of Washington State University. In 2016, Dave moved to Fort Collins, Colorado to take his current position at Colorado State University.

Endurance and persistence also stand out in Dave's hobbies. Dave finished his first century bike ride (100 miles) before he had his driver's license. When Dave was a freshman in college, he skied the 55 kilometer (34 mile) American Birkebeiner Ski Race. Dave played soccer from age 15 to age 35, including playing for three different soccer teams one summer. By his late thirties, Dave developed severe arthritis in his ankle, preventing him from running or cross-country skiing. However, Dave adapted and found another form of exercise; hand-cycling. A hand-cycle is shaped like a recumbent bike, but it is pedaled by arms instead legs. Dave started hand-cycling in 2002. In December of 2018, Dave passed the 30,000-mile milestone of hand-cycling. This had culminated in completing the 205-mile Seattle to Portland Bike Ride in July of 2016.

Contents

List of Tables

List of Figures

Abstract

A problem which a business organization may face, but may not realize, is that some of its customers or clients are unprofitable. In other words, an organization may incur more in expenses and costs to service a customer than it collects in revenue from the customer. Therefore, the organization's relationship with such customers may actually be harmful to the organization.

This study researched how organizations in the business world measure individual customer profitability, and what actions do they take to deal with a customer found to be unprofitable.

Respondents from 243 businesses completed a survey. The responses were from a variety of industries and sizes. However, the organizations were slightly skewed toward small to medium size businesses (59% of all respondents). Regarding the industries represented, the sample was slightly skewed toward Manufacturing (31% of all respondents) and Services (21%).

The major finding of the practices of organizations regarding individual customer profitability are:

Table 1 – Summary of Major Findings

Issue	**Findings**
How often is customer profitability measured?	There is a wide variation of practices. From *Not in last 12 months* to *Monthly.*
How accurately is it measured?	Most respondents believe their measurements are accurate.
What tools/methods are used to measure?	Most companies use a low degree of sophistication. Most use *Revenue minus Direct Expenses,* which does not consider Indirect Expenses.
What is done if a customer is unprofitable?	• The most common course of action is *Increase Prices to Customer* (52% of respondents) • The second most common was *Fire Customer* (30% of respondents).
Considered Negative publicity or word-of-month before firing a customer?	Almost 70% of businesses did consider negative publicity.

Introduction

One problem which businesses may face, and may not be aware of, is that some of their customers actually hurt the business financially. With a sound business model, transactions with profitable customers or clients contribute to a firm's profitability. Unprofitable customers, however, have the opposite effect; they decrease the profitability of a business. If the number and size of unprofitable customers is large enough, the problem becomes a heavy weight that either prevents the organization from reaching its full potential, or threatens the survival of the company. For a business enterprise to be economically sustainable and viable, it must earn a profit, and a return on investment that exceeds its cost of capital, which means serving customers that contribute the company profitability. This dissertation focuses on measuring, identifying, and managing unprofitable customers.

The purpose of this research study is to examine how organizations, whose sales are primarily business-to-business (B2B), measure customer profitability, and identify and manage unprofitable customers, with the goal of addressing the following research questions:

1. Do business firms routinely measure customer profitability?
2. How accurately is customer profitability measured?
3. How do firms measure customer profitability? What is measured/included, and what tools are used?
4. Once the profitability of a customer is measured, how do businesses decide whether a customer is unprofitable? Is it a simple determination that the net profit from the customer is zero? Or are there other factors which are considered such as future profitability or referrals to potential new customers?
5. What are the actions firms take to manage customers determined to be unprofitable?
6. Before a business terminates the relationship with (fired) a customer, does it consider the impact of potential negative publicity or negative word-of-mouth?

The basic definition and measurement of a customer's profitability is the direct revenue from sales to the customer minus the direct expenses of providing the customer the product or service. However, there are indirect benefits and costs from the relationship with the customer, which are difficult to capture and measure. Among the indirect benefits are the sales referrals, the net promoter score, and possibly positive publicity about a firm's product or service. The largest indirect expense is often employee's time before, during, and after the sale especially customer service in assisting the customer with the use of the business' product. Other indirect costs include delivery, rush order, and setup costs for small batches, and the cost of support departments such as the Design Department. Various studies have proposed formulas for Customer Profitability.

Table 2 – Definitions of Customer Profitability

Author	**Customer profitability formula or variables**
Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer Satisfaction, Market Share, and Profitability: Findings from Sweden. *Journal of Marketing*, *58*(3), 53–65.	Should include • "length of average repurchase cycle" • "average gross margin per period" • "Satisfaction & Loyalty" • "a discount factor"
Bader, J. (2006). How to grade Customer Profitability. *Electrical Wholesaling*, *October*(10), 36–40.	"Contribution to Net Profit = Sales - COGS - (Number of Orders x Cost to Process one Order)"
Helgesen, O. (2005). Customer segments based on customer account profitability. *Journal of Targeting, Measurement and Analysis for Marketing*, *14*(3), 225–237.	"Customer Profit = Revenue - Revenue reductions - Direct product costs - Direct order related marketing costs - Direct customer related capital costs - Indirect order related costs - Indirect customer related costs"
Mulhern, F. J. (1999). Customer profitability analysis: Measurement, concentration, and research directions. *Journal of Interactive Marketing*, *13*(1), 25–40.	Should include • "price of customer purchases" • "unit cost of purchase" • "marketing cost" • "discount rate of money"
Pfeifer, P. E., Haskins, M. E., & Conroy, R. M. (2004). Customer Lifetime Value, Customer Profitability, and the Treatment of Acquisition Spending. *Journal of Managerial Issues*, *17*(1), 25.	"Customer Profitability = Revenues – Expenses. This is measured for a specific time period; month, quarter, year. Customer Lifetime Value = Present value of future cash flows"
Reinartz, W., Thomas, J. S., & Kumar, V. (2005). Balancing Acquisition and Retention Resources to Maximize Customer Profitability. *Journal of Marketing*, *69*(1), 63–79.	"Customer Profitability = Total Revenue - Direct Product Related Cost - Total Retention Costs - Acquisition Costs"

The basic definition of an Unprofitable Customer in this study is, a customer for which the amount of total revenue from the customer is less than total costs incurred in the relationship with the customer.

What could cause a customer to become unprofitable?

1. Low sales price.
2. High cost of goods/service.
3. Indirect costs which are not considered when setting the selling price.
4. Inefficiencies by the seller to serve certain customers. It is possible the seller is inefficient in producing its product or providing its service, or has inefficiencies in its indirect costs such as Design, Customer Service, Delivery, etc.
5. Inaccurate customer accounting systems. In other words, the customer is profitable, but the seller's customer accounting systems inaccurately calculates the customer's probability as negative.

Once a business determines a customer is unprofitable, there are several possible actions it can take:

1. Adjust its pricing to make the customer profitable.
2. Change the customer product and service mix to increase customer profitability.
3. Become more efficient, thereby reducing its own costs.
4. End the relationship with the unprofitable customer.
5. Take no action and accept the situation as it is.

Literature Review in Accounting and Marketing

The literature to review was selected through Google Scholar using the search term "customer profitability" and slight variations, as well as twelve customer profitability articles identified by the Dissertation Chair, Dr. Mark Frigo. Once the title and author of an article was identified, the full text was obtained through either the DePaul University Library or the

Colorado State University Library. A total of thirty-seven customer profitability articles were collected. The most relevant articles, totaling 21, are summarized in an annotated bibliography.

The topic of identifying and managing unprofitable customers is part of two different fields of business research, managerial accounting, and relationship marketing. There has been extremely little published research on this topic in accounting journals. Foster et al (1996) discussed how to measure customer profitability and proposed solutions regarding how to address common problems in measuring it.   Some marketing studies have addressed topics peripheral to the six questions summarized in the Introduction. Haenline & Kaplan (2010 and 2012) published two studies on the social and publicity effects of terminating an unprofitable customer relationship. Woo & Fock (2004) published a study which classified customers into four categories of desirability, and proposed strategies for dealing with each of the four categories. Helm et al.'s (2006) study somewhat addresses the questions in this study.

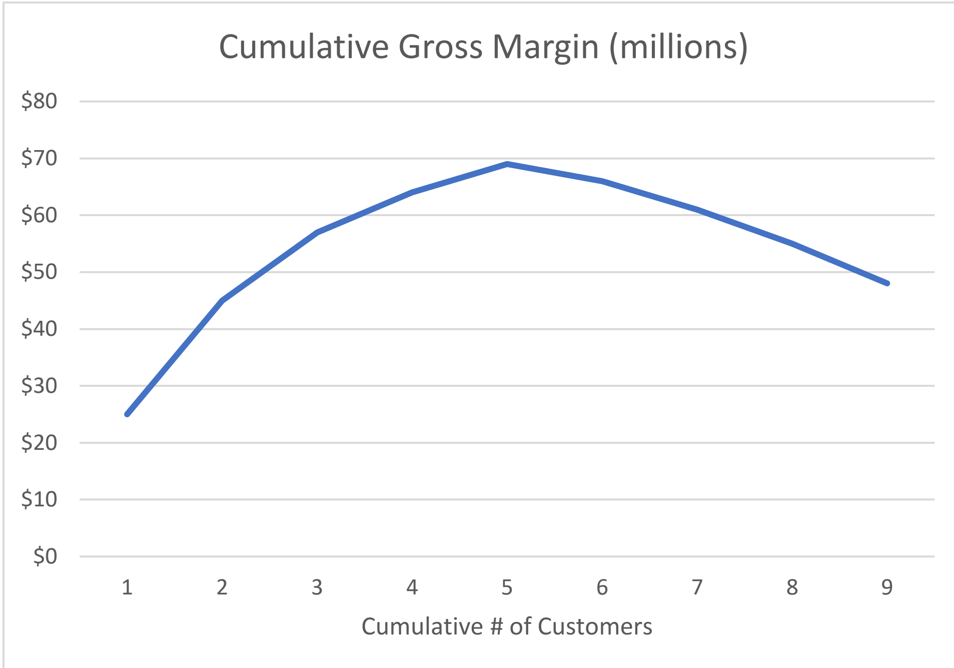
There are articles which provide case studies or discuss issues to consider when reviewing, assessing, and managing unprofitable customers. One of many articles written by Robert Kaplan was *When to drop an unprofitable customer* (Harvard Business Review, April 2012, 90(4)), which is based on Harvard Business School Case Study (# 9-110-007), Eklay Plumbing Products Division.   This study highlights the issues companies face when making the decision to drop a customer. Those issues include the accuracy of its customer accounting system including incorporating Activity Based Costing; classifying products into the categories of drop, reprice, redesign, or take no action; the difficulty of estimating the intangible benefits of an unprofitable customer such as positive publicity and referrals; and the reluctance to end a relationship with a long-term customer. Another Kaplan article, *A Balanced Scorecard Approach to Measure Customer Profitability* (Harvard Business School Working Knowledge, August 2005) identifies customer costs which business firms often overlooked or have trouble capturing. These include product or service customization; small order quantities; special packaging; expedited and just-in-time delivery; and substantial pre-sales support from marketing. Kaplan and V.G. Narayanan's article, *Measuring and Managing Customer Profitability* (2001), describes the experience of Owens & Minor, a Fortune 500 company, in measuring, assessing, and managing unprofitable customers. This article also discusses common costs which make customers unprofitable including ordering custom products, ordering small quantities, unpredictable order arrivals, etc. The article also discusses different approaches to correct the situation. One interesting approach was to be completely honest with the unprofitable customer, including opening the company's books to a customer and showing the actual costs to service it. Kermisch & Burns (2018) surveyed 1,700 companies regarding their B2B pricing practices. They found "roughly 85% of respondents believed their pricing decisions could improve". Common actions among top performers are to set pricing at the customer and product level, set incentives for sales staff based on profitability margin not purely sales revenue, and train sales and pricing staff to make better pricing decisions. To improve the process, they suggest prices be based on three factors (1) the attributes and benefits each customer values, (2) industry alternatives and competitive intensity, and (3) margin calculated to include all indirect costs such as rebates, freight, terms, etc. Additionally, incentive plans should be clearly communicated to sales staff, and based on margin.

Most companies which calculate customer profitability for the first time, are surprised how many customers are unprofitable, and that customers which provide the highest sales volume, are not necessarily the most profitable. Helm et al., 2006 found that 17.5% of respondents "claim more than half of their customer portfolio is not profitable". Accenture, 2014 found "a $5 billion consumer good company discovered that 20 percent of its customer base generated 80% of its profits, 15 percent generated 30% percent of the profits, while 50 percent produced zero profit, and 15 percent caused losses of 10%." Kaplan, 2005 describes an insurance company which found that "the most profitable 40 percent of customers generate 130 percent of annual profits; the middle 55 percent of customers break even, and the least profitable 5 percent of customers incur losses equal to 30 percent of annual profits."

Several publications discuss the "Whale" curve directly (Cokins, 2015; Elias & Hill, 2010; Helgesen, 2006; Institute of Chartered Accountants, 2002; Kumar, Shah, & Venkatesan, 2006; Mulhern, 1999; Shin, Sudhir, & Yoon, 2012; Storbacka, 1997). See Table 3 below.

Table 3 - Whale Curve

Customer #	**Sales**	**Profitability**	**Cumulative Profitability**
1	$43	$25	$25
2	50	20	45
3	35	12	57
4	37	7	64
5	40	5	69
6	25	-3	66
7	32	-5	61
8	20	-6	55
9	29	-7	48
Total	**$311**	**$48**	



Once an organization knows the profitability of each customer, it can draw its whale curve. The underlying data for the whale curve is a list of the profitability of an organization's customers in descending order. The whale curve illustrates how much the most profitable customers contribute to the organization's profitability, how little the customers in the middle contribute, and how much the unprofitable customers detract from the company's profits.

Haenlein & Kaplan, 2010, 2012 researched consumer's reactions to a business dropping unprofitable customers. Both studies were lab experiments in a business-to-consumer environment. The hypothetical business was a cell phone carrier dropping an unprofitable customer. The 2010 study found that a consumer would have a negative active or cognitive reaction, but was less likely to change behavior. The 2012 study found consumers would respond "either by leaving the abandoning firm or raising their voice against such behavior". The 2012 study also found the strength of the relationship between the consumer and the abandoned customer will not affect the consumer's behavior.

Gary Cokins is a well-known expert in this field. One of Cokin's publications is *Performance management: finding the missing pieces (to close the intelligence gap)* (2004). Among his publications which address customer profitability measurement are *Performance management: finding the missing pieces (to close the intelligence gap)* (2004), and *Performance management: Integrating strategy execution, methodologies, risk, and analytics* (2009). Cokins describes creating an Activity-Based Management Cost Assignment Network, which assigns the resources used or funds spent to either the cost of servicing a customer or a business sustaining activity. Among the tools suggested are Activity-Based Cost Management (ABC/M) systems. ABC/M systems are highly advanced and use online analytical processing (OLAP). These systems use ABC costing to calculate the fully loaded cost of serving a customer. ABC/M provides profit-and-loss income statements for both customer segments and, if needed, for individual customers. Additionally, Cokins believes that in addition to unprofitable customers, less profitable and barely profitable customers also deserve management's attention and action.

There is only one study, Helm et al. (2006), which touches on the same topics as my research; that is, do businesses identify unprofitable customers, how is profitability measured, and what actions do businesses take when it determines a customer is unprofitable? The study by Helm et al. (2006) was limited in scope and possibly not applicable to businesses in the United States. Helm et al. (2006), gathered their data during or before 2004, only from companies in Germany which were in the Mechanical Engineering Industry, and solely from business-to-business supplier relationships. Furthermore, Helm et al. (2006) found that 17.5% of companies in their study, reported less than 50% of their customer relationships were profitable. Of the practitioner articles on this subject, the only information regarding how businesses identify and manage unprofitable are two case studies.

This literature review underscores the need for more research in the area of unprofitable customers. Specifically, how do businesses identify and manage unprofitable customers.

Table 4 - Questionnaire Development

Research Question #	Topic	Research Question	Survey Question #
1	Measuring Customer Profitability	Frequency of measuring and reviewing profitability of customers.	2
2	Measuring Customer Profitability	Methods and Tools for measuring customer profitability?	4
3	Measuring Customer Profitability	Organization's accuracy in measuring the profitability of a customer?	1
4	Identifying Unpropitiable Profitable Customers	What factors/criteria are considered, in determining that a customer is unprofitable?	5
5	Managing Unprofitable Customers	Actions to manage unprofitable customers.	6
6	Managing Unprofitable Customers	Concern of negative publicity or word of mouth when terminating a relationship with an unprofitable customer.	7
	Which Department is responsible	Not a research question.	3
	Description of Organization	Not a research question.	8
	Description of Organization	Not a research question.	9
	Description of Organization	Not a research question.	10
	Description of Organization	Not a research question.	11
	Description of Organization	Not a research question.	12
	Description of Organization	Not a research question.	13

Methods

Method and analytical strategy including the identification of appropriate measurements.

The data for this research study was collected through questionnaire surveys. Preliminary interviews were conducted with senior level accounting and finance executives to review and refine the survey structure and questions.

Review of Survey Questionnaire with Financial Executives

Gary Cokins, Steve Brown, Ed Riley, and Eric Osterloh reviewed the preliminary survey. Gary Cokins is the Founder and CEO of Analytics-Based Performance Management LLC and well-known expert in the field of Enterprise & Corporate Performance Management. Steve Brown is the Vice President of Finance at Woodward Incorporated's (WGOV) Industrial Control Systems Division. Woodward's 2017 Revenue was $2.1 billion. Woodward designs, manufacturers, and services energy control solutions for aircraft engines, industrial engines, turbines, power generation and mobile induction equipment. Ed Riley is a Group Controller for the IDEX Corporation (IEX). IDEX's 2017 Revenue was $2.3 billion. IDEX manufactures pumps, valves, flow meters and other fluidics systems and components and engineered products to customers. Eric Osterloh is the Senior Vice President of Client Services at NET(net), Inc. Net(net) is an Information Technology Supply Chain consultant and strategic advisor, which optimizes IT investments for its clients.

Questionnaire Survey

Once the questionnaire survey was finalized, several sources were used to identify Chief Financial Officers, Controllers, and Vice Presidents of Finance to whom surveys will be sent.

1. The LexisNexis database provides lists of executives among other information. In March 2018, I used it to create a preliminary list of 37,611 Chief Financial Officers, and 599

Vice Presidents of Finance, 44,929 Controllers, including email addresses. The information provided was sorted and segmented by size of organization, public vs. private, industry, etc. There are over 16,000 organizations which have B2B SIC codes.

2. My personal network. This includes Financial Executives International (FEI), which is a professional organization of Chief Financial Officers, Controllers, Treasurers, and Vice Presidents of Finance. In March 2018, I created a list of 216 members of my local FEI Chapter with email addresses. My personal network also includes CFO's, Controllers, etc. who speak to my classes at Colorado State University (CSU), and other professional associations such as the Institute of Management Accountants and the Colorado Society of CPAs.
3. The personal network of the dissertation committee members including the Dissertation Chair, Dr. Mark Frigo.
4. The personal network of others from whom I, or the dissertation committee, request assistance. This includes CSU Accounting Faculty, fellow Doctor of Business Administration students who are high-level executives, and other DePaul Business faculty.

Although surveys typically have very low response rates, Source 1 and Source 2 above totals 83,355 high level accounting executives. If this study is limited to B2B organization and only 2% of Accounting and Finance executives in that population complete the survey, it will still provide a sample size of 327 organizations. Furthermore, the response rate from Source 2 and Source 3 should be high, as I and members of the dissertation committee personally know these potential survey respondents, and plan to call them requesting their participation. See Appendix for the survey questions and answer choices.

The result of using information from all of the sources provided a list of 43,418 potential survey respondents, to which invitations were sent.

Table 5 – Source of potential respondents

Source	Number of Companies	Percentage of Total
Lexis-Nexus	43,300	99.95%
FEI	11	0.03%
Personal Network	7	0.02%
Total	**43,318**	**100.00%**

The survey participants were essentially chosen from the list of potential survey participants generated by LexisNexis which had email addresses and were not in the retail business.

No specific size company or industry was targeted. Ten thousand eight hundred sixty-five survey invitations were returned/bounced, presumably due to an invalid email address. The breakdown of invitations to take the survey by Company Revenues was:

Table 6 – Size of Potential Respondents

Annual Revenue		Number of Companies	Percentage of Total
up to	$10,000,000	12,435	38.32%
$10,000,001	$50,000,000	8,997	27.72%
$50,000,001	$10,000,000	2,364	7.28%
$100,000,001	$500,000,000	2,981	9.19%
over	$500,000,000	2,804	8.64%
Not Available		2,874	8.86%
Unknown Difference between total and categories		(2)	-.01%
Total		32,453	100.00%

The companies receiving invitations represented at 652 different SIC Codes. On average, each SIC code represented 0.15% of the total sample. No SIC code receive more than 2.77% of all invitations except Code 7389, Business Services. The breakdown of invitations to take the survey by SIC Division was:

Table 7 – SIC Divisions of Respondents which received a survey invitation

SIC Division	Number of Companies	Percentage of Total
A - Agriculture, Forestry, and Finishing	432	1.33%
B – Mining	436	1.34%
C – Construction	3,158	9.73%
D – Manufacturing	9,588	29.55%
E - Transportation, Communications, Electric, Gas, and Sanitary Service	2,508	7.73%
F - Wholesale Trade	3,779	11.65%
G - Retail Trade	1	0.00%
H - Finance, Insurance, and Real Estate	3,182	9.80%
I – Services	9,246	28.49%
Not Available	125	0.39%
Unknown Difference	(2)	-0.01%
Total	**32,453**	**100.00%**

The only industry which was all but omitted was Retail, SIC Division G. Retail businesses were omitted because the topic of Customer Profitability Management generally does not apply to Retailers. In the past, Retailers did not have the information technology to track the profitability of several hundred to several million individuals who shop at their stores. It is true that recent technology has given retailers much more information on the purchases of an individual shopper. However even if complete revenue, expense, and profitability information on an individual shopper was available, it may not be cost-beneficial for large retailers to track and try to manage the profitability of several thousand to several million individual shoppers. For example, an individual shopper may only spend a few hundred to a few thousand dollars a year at a retailer such as Target, whose annual revenue is over $71 billion.

Academic and Managerial Implications of Research

This study provides much needed academic research in an area in which few studies exist. Specifically, the study attempts to answer the following questions:

1. Do businesses periodically review past transactions of its customers to determine which customers are profitable or unprofitable?
2. How do businesses measure a customer's profitability?
3. What level of confidence do firms have in the accuracy and reliability of their cost systems in terms of measuring customer profitability?
4. How do businesses define "unprofitable customer"?
5. If a business determines a customer is unprofitable, what action(s) does the firm take? Adjust its pricing to make the customer profitable? End the relationship? Or take no action and accept the situation as it is?
6. Do businesses fear negative publicity or word of mouth when considering whether the relationship with an unprofitable customer should be terminated?

The results of this research will also provide valuable information to managers in business on how to deal with a serious business problem, including the following insights:

- Research Question 1 will bring awareness to the problem of unprofitable customers. Some managers may not even be aware of this problem.
- Research Question 2 and 4 will provide suggested a tool(s) for managers to determine whether a customer is unprofitable.

- Research Question 5 and 6 will provide the basis for a discussion among managers and information regarding how other organizations have dealt with the sensitive issue what a manager should do, when they identify an unprofitable customer.

All the information above will greatly help businesses reach their full potential, or survive difficult periods.

Summary and Discussion of Results

Most exploratory or descriptive studies in the field of business do not use bivariate analysis or predictive modeling. Since such studies are exploring a previously unexplored topic, there are no long-held theories or hypotheses to test. Accordingly, no bivariate analyzes or predicative modeling were used in this study. However descriptive statistics and correlations among variables was performed on the data.

Part 1 – The Respondents

A. Invitations to take the survey were emailed between October 22, 2018 and November 25, 2018. The Survey was closed on December 22, 2018.

B. There were 243 completed surveys, although not all respondents answered all the questions.

C. Most of the businesses responding were small to mid-sized.

Table 8 – Size of organizations which completed a survey vs. organizations which received an invitation to take the survey. Note – size is reported by Lexis-Nexis Academic Database.

Annual Revenue		**Percentage of Companies Responding**	**Percentage of Companies Invited**	**Difference**
up to	$10,000,000	43.98%	38.32%	5.66%
$10,000,001	$50,000,000	34.03%	27.72%	6.31%
$50,000,001	$100,000,000	6.23%	7.28%	-1.05%
$100,000,001	$500,000,000	8.30%	9.19%	-0.89%
over	$500,000,000	3.73%	8.64%	-4.91%
Not Available		3.73%	8.85%	-5.12%
Total		100.00%	100.00%	

D. The composition of the SIC Divisions which completed the survey are listed below.

Table 9 – SIC Divisions of organizations which completed a survey vs. organizations which received an invitation to take the survey.

Industries by SIC Division	Received Survey Invitation	Completed Survey	Difference
A - Agriculture, Forestry, and Fishing	1.33%	1.23%	0.10%
B - Mining	1.34%	0.82%	0.52%
C - Construction	9.73%	15.23%	-5.50%
D- Manufacturing	29.55%	31.27%	-1.72%
E- Transportation, Communications, Electric, Gas, and Sanitary Service	7.73%	4.94%	2.79%
F - Wholesale Trade	11.65%	4.53%	7.12%
G - Retail Trade	0.00%	0.00%	0.00%
H - Finance, Insurance, and Real Estate	9.80%	4.12%	5.68%
I - Services	28.49%	20.58%	7.91%
Not available	0.38%		
Not provided by Respondent		17.28%	
Total	**100.00%**	**100.00%**	
N	**32,453**	**243**	

E. Over 82% of respondents were either manufacturers or service organizations.

Table 10 – Distribution of organization type of those which completed a survey.

Type of Organization (self-reported)	Percent of Respondents
Manufacturer	37.76%
Service	43.57%
Reseller, Retailer, or Distributor	10.79%
Other	7.88%

This is not surprising. As previously mentioned, organizations with SIC codes of Resellers/Retailers/Distributors not intended to receive a survey. Only one invitation was sent by accident to an organization with SIC code 5999 (Miscellaneous Retail Stores). Additionally, Individual Customer Profitability Management is much more applicable to Manufacturers and

Service organizations. A retailer who received the survey would be more likely to ignore it, compared to those in other types of organizations.

<u>Part 2 – Findings on the Main Issues of the Study</u>

Table 11 – Summary of Findings

	Issue	**Findings**
1	How often is customer profitability measured? See Figure 1	There is a wide variation of practices. • This was measured from *Not in last 12 months* (assigned value of 1), to *Monthly* (value of 5). • Mean was 3.42 with a standard deviation 1.45.
2	How accurately is it measured? See Figure 2	Most believe their measurements are accurate. • 79% have *some* to *very high confidence* in the accuracy of their customer profitability measurements.
3	What tools/methods are used to measure? See Figure 3	Most use a low degree of sophistication. • The most common choice was to use *Revenue minus Direct Expenses* of a customer; 63% of respondents. • Only 13%, 7%, and nearly 0%, use the advanced measures of *Activity Based Costing*, *Customer Lifetime Value*, and *Promoter Score*, respectively.
4	Does any industry use Activity Based Costing (ABC) more than other industries? See Table 12	Of the six industries for which at least 10 responses were collected, usage of ABC ranges from 8.33% to 16.22%. Although there is some variation between industries, the vast of majority of businesses in all industries are not using ABC.
5	Do organizations of a certain size use ABC more than organizations of other sizes? i.e. Small vs Mid-Size vs. Large? See Table 13	Respondents were grouped into five categories based on size. Usage of ABC ranges from 6.98% to 17.39%. Although there is some variation between organizations of different sizes, the vast of majority of businesses in all sizes are not using ABC.
6	Do organizations which use ABC, allocate indirect expenses more often? See Table 13	No. In fact, there seems to be an inverse relationship between allocation of indirect expenses, and the use of ABC. Refer to Table 13. Respondents were grouped into five categories according to size as measured by annual revenue. The two groups which use ABC the most, \$10 - \$50 million and over \$500 million, allocate indirect expenses the least. The two groups which use ABC the least are \$50 - \$100 and \$100 -

	Issue	Findings
		$500. These two groups are second and third in allocation of indirect expenses, and close very close to the group which allocates the most.
7	Do organizations which use ABC measure customer profitability more accurately that other organizations? See Figure 4	According to the respondents self-reported accuracy, only slightly. The mean of organizations which do not use ABC is 3.81 out of 5.00. The mean of organizations which use ABC is 4.07, only a 6.71% increase.
8	At what point is a customer unprofitable? See Figure 5	Use a simple guideline and a lot of judgement. • 46% consider a customer to be unprofitable if *Net Profit* (Revenue minus Expenses) is *less than zero*. • 30% use "a lot of judgement".
9	What is done if a customer is unprofitable? See Figure 6	Raise prices or terminate the relationship with the customer. • The most common course of action is *Increase Prices to Customer* (52% of respondents) • The second most common was *Fire Customer* (30%).
10	Types of responses considered when managing unprofitable customers? See Figure 7	Among the six options provided, the most noteworthy findings are: • 48.56% only consider one of the options • 26.92% only consider two of the options • 2.40% will consider five of the six options • 0.04% will consider all six options
11	Considered Negative publicity or word-of-mouth before firing a customer? See Figure 8	Almost 70% of businesses did consider negative publicly. Also, there were 3 answer choices and the responses were relatively evenly split between levels of consideration. • 31% responded they gave negative publicity no or little consideration. • 28% responded they gave this some consideration. • 41% responded they gave this serious consideration

Figure 1 - Frequency of Customer Profitability Measurements

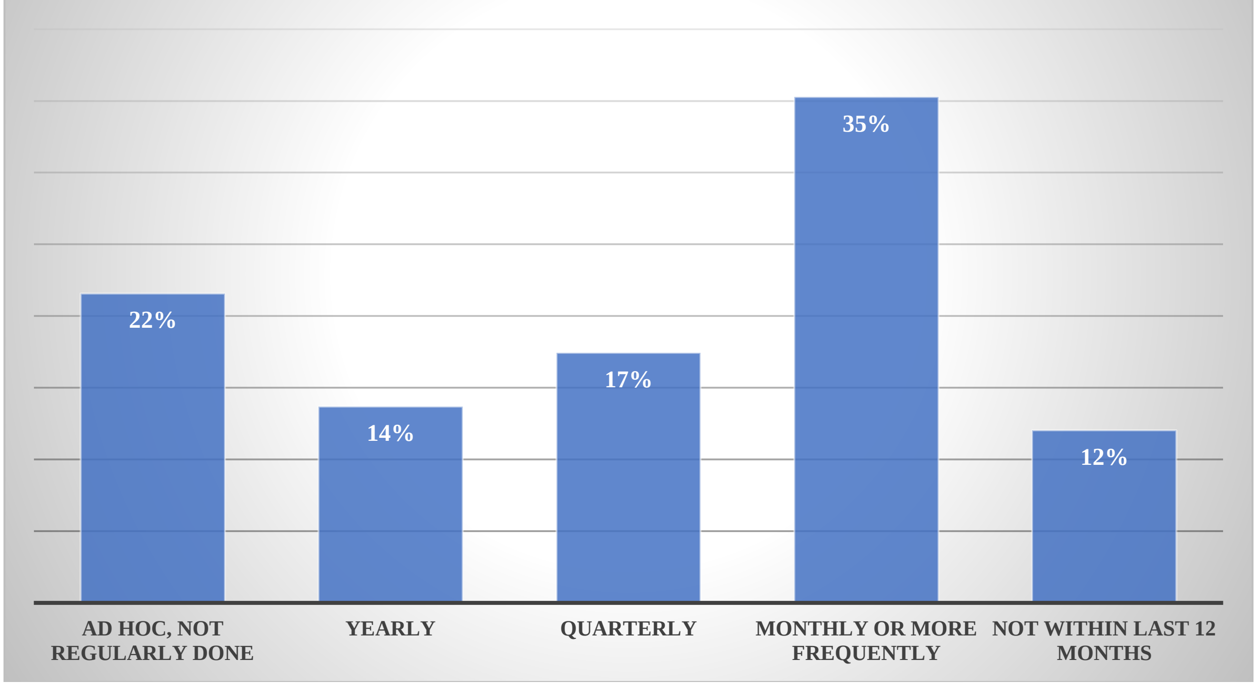
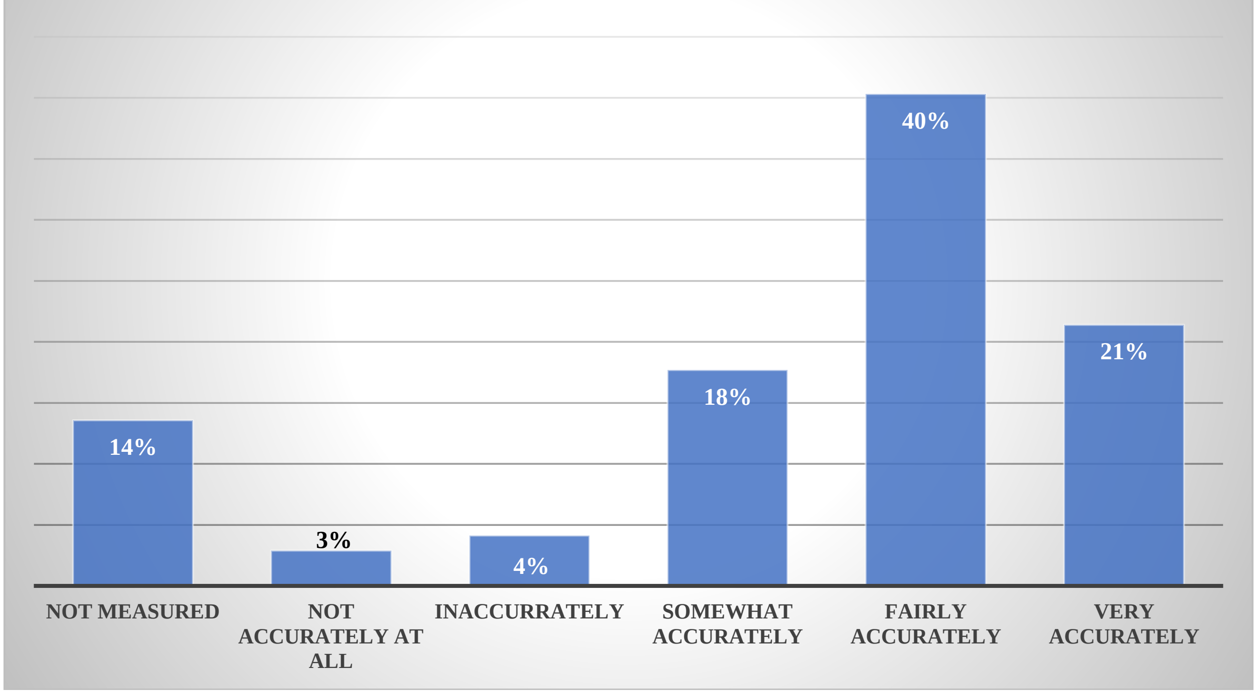


Figure 2 - Accuracy of Customer Profitability Measurements



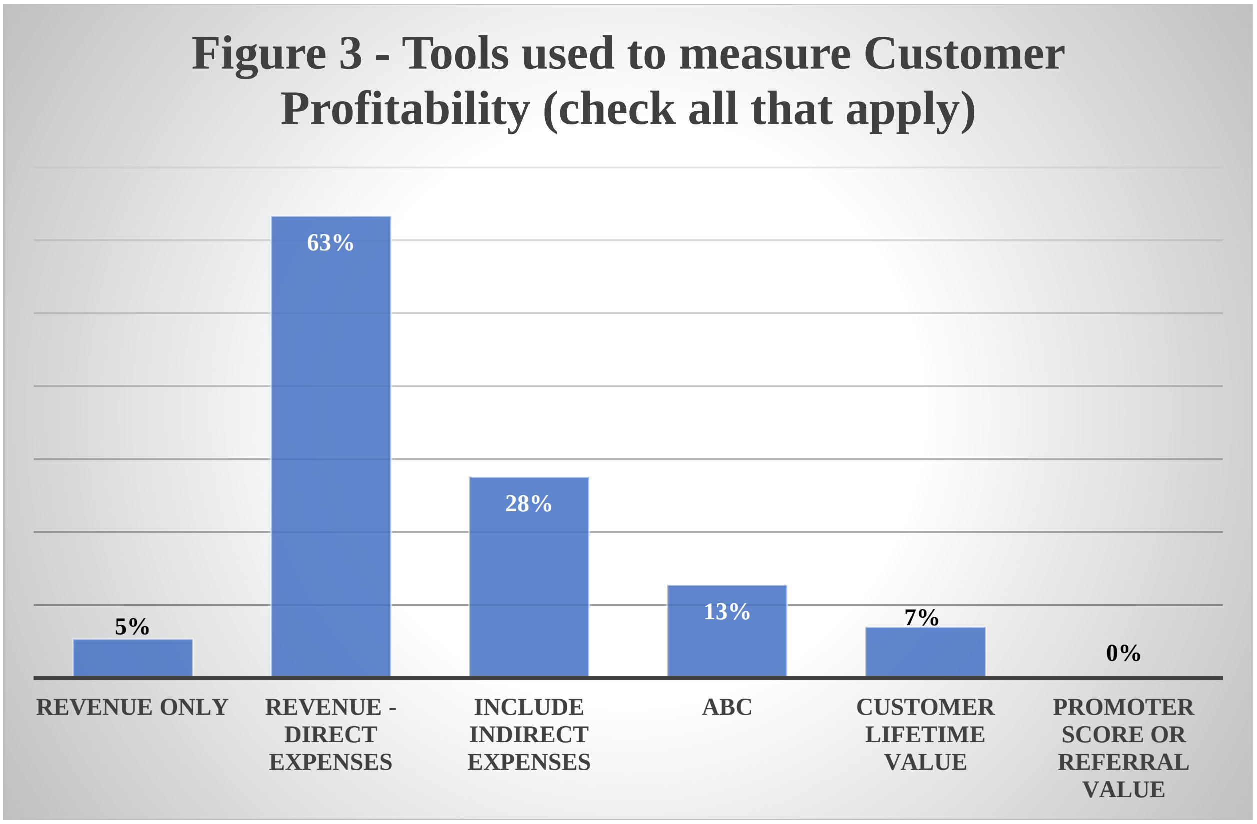
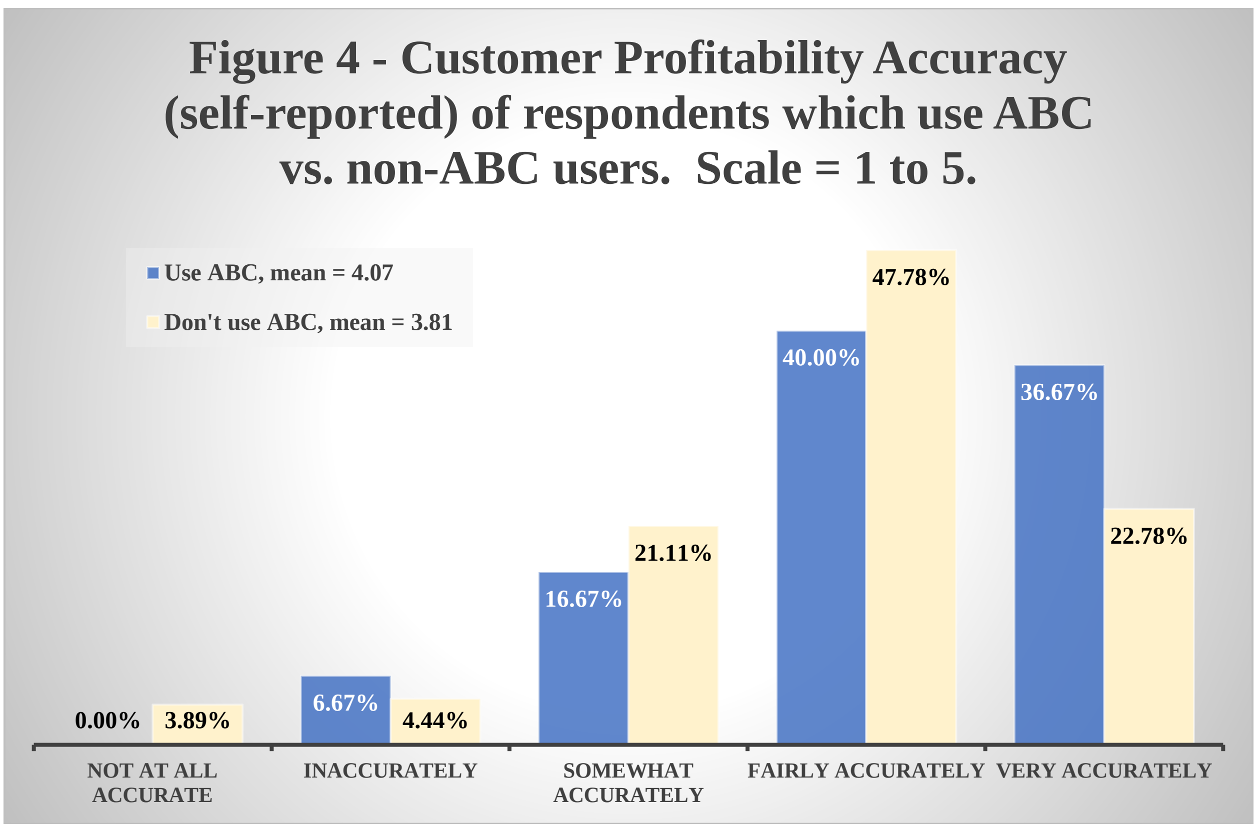


Table 12 – Use of ABC by SIC Division

SIC Division	Number of firms	% of firms	Use ABC
A - Agriculture, Forestry, and Fishing	3	1.23%	33.33%
B - Mining	2	0.82%	0.00%
C - Construction	37	15.23%	16.22%
D - Manufacturing	76	31.27%	13.16%
E - Transportation, Communications, Electric, Gas, and Sanitary Service	12	4.94%	8.33%
F - Wholesale Trade	11	4.53%	9.09%
H - Finance, Insurance, and Real Estate	10	4.12%	10.00%
I - Services	50	20.58%	16.00%
Not available	42	17.28%	7.14%
Total	243	100.00%	
Weighted Average			12.76%
Highest			33.33%
Lowest			0.00%
Standard deviation			9.86%

Table 13 – Firms which include Indirect Expenses in Customer Profitability Measurements and use of Activity Based Costing (ABC) by size of organization, as measured by annual revenues. Note – size of the organization, its allocation of indirect expenses, and use of ABC are all self-reported by respondents.

Size of Organizations	# firms	% of firms	Include Indirect Expenses	Use ABC
up to $10	47	19.34%	34.04%	12.77%
$10 to $50	93	38.27%	23.66%	16.13%
$50 to $100	37	15.23%	32.43%	8.11%
$100 to $500	43	17.70%	32.56%	6.98%
> $500	23	9.46%	13.04%	17.39%
Total	243	100.00%		
Weighted Average			27.57%	12.76%
Highest Use			34.04%	17.39%
Lowest Use			13.04%	6.98%
Standard Deviation			7.87%	3.96%



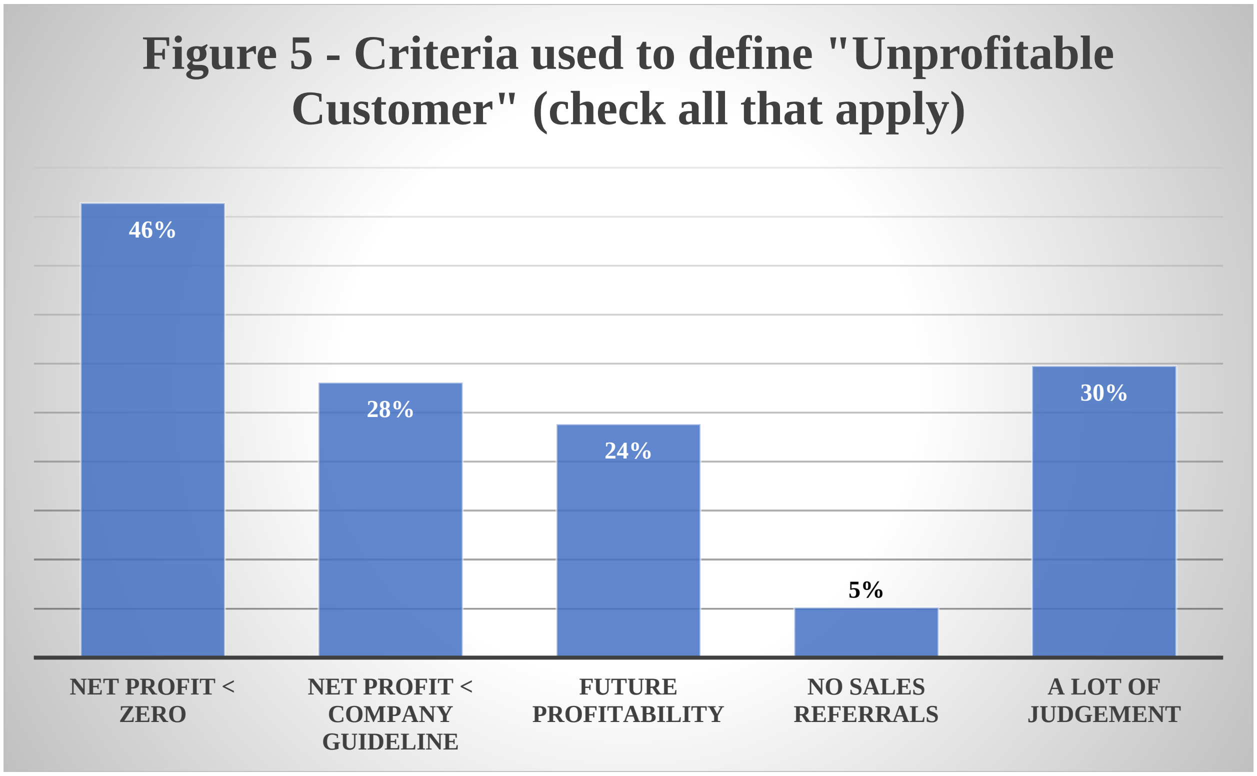


Figure 5 - Criteria used to define "Unprofitable Customer" (check all that apply)
46%
28%
24%
5%
30%
NET PROFIT < ZERO
NET PROFIT < COMPANY GUIDELINE
FUTURE PROFITABILITY
NO SALES REFERRALS
A LOT OF JUDGEMENT

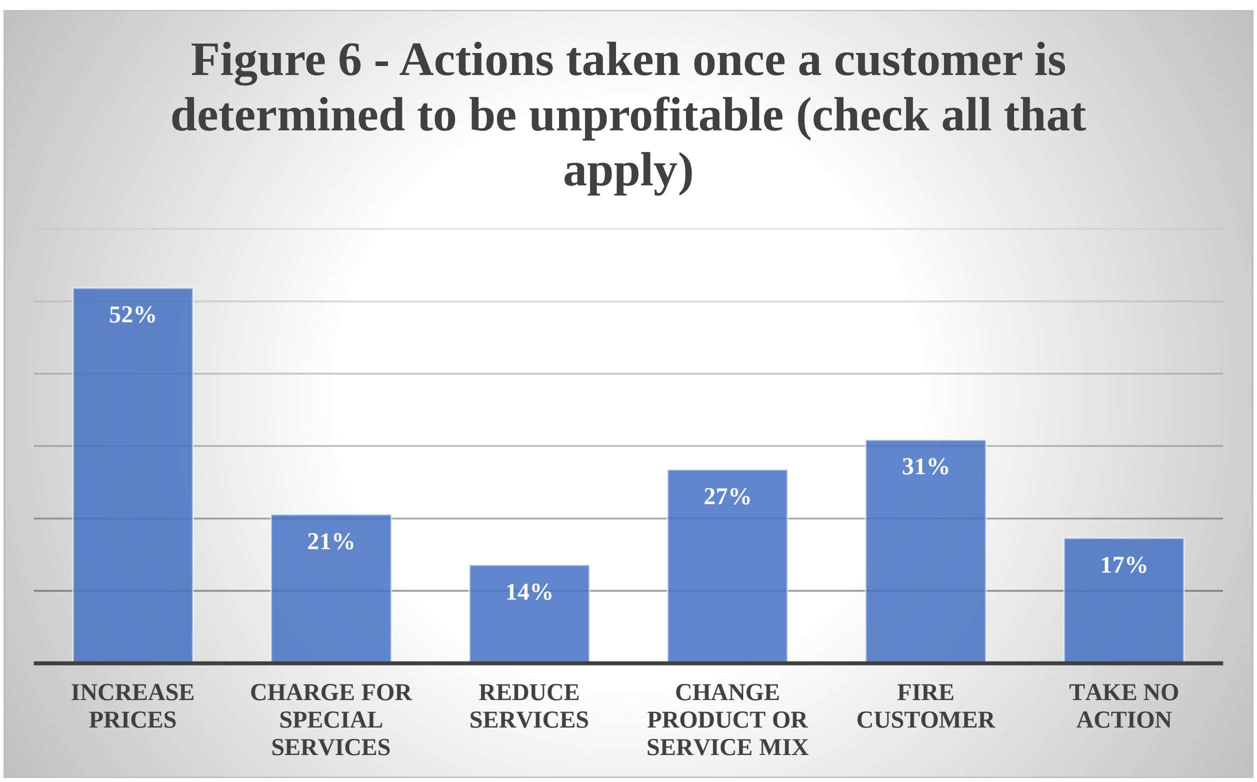


Figure 6 - Actions taken once a customer is determined to be unprofitable (check all that apply)
52%
21%
14%
27%
31%
17%
INCREASE PRICES
CHARGE FOR SPECIAL SERVICES
REDUCE SERVICES
CHANGE PRODUCT OR SERVICE MIX
FIRE CUSTOMER
TAKE NO ACTION

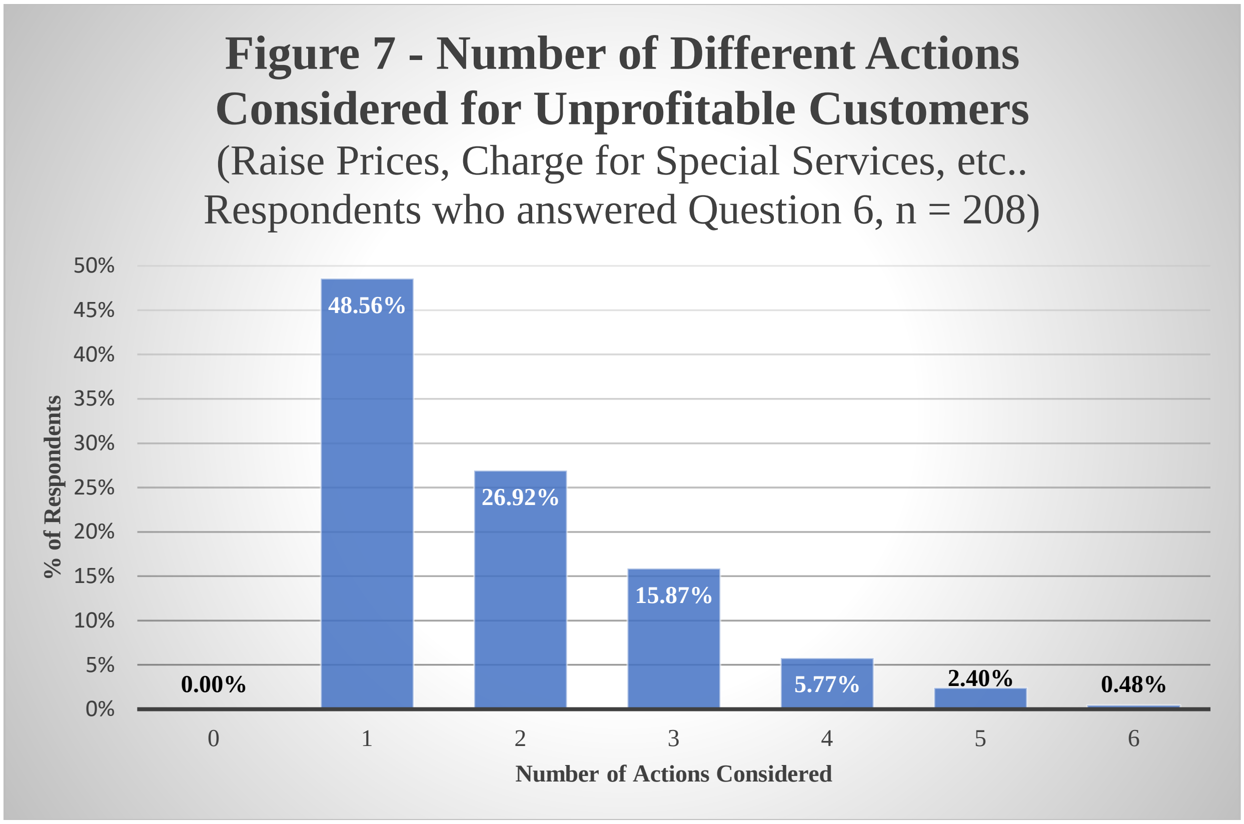


Figure 7 - Number of Different Actions Considered for Unprofitable Customers
(Raise Prices, Charge for Special Services, etc.. Respondents who answered Question 6, n = 208)
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
% of Respondents
0.00%
48.56%
26.92%
15.87%
5.77%
2.40%
0.48%
0
1
2
3
4
5
6
Number of Actions Considered

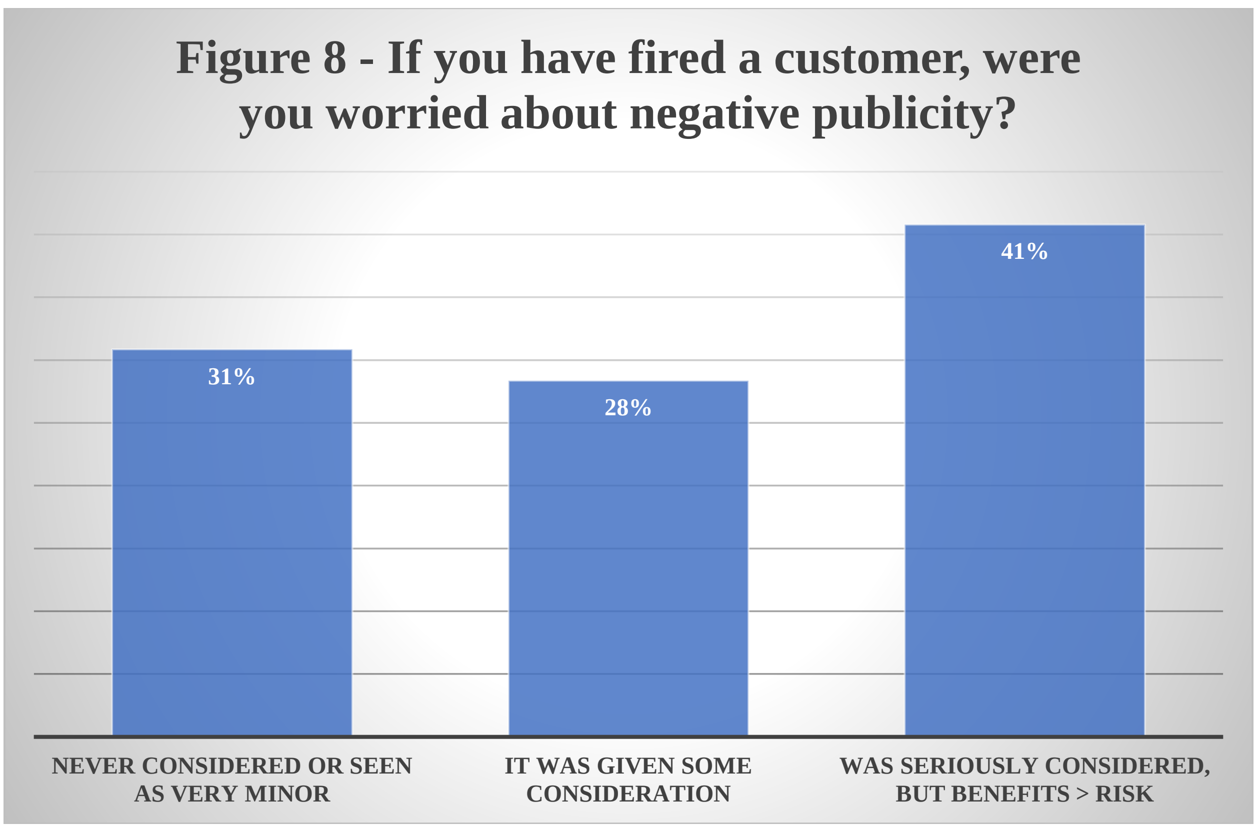


Figure 8 - If you have fired a customer, were you worried about negative publicity?
31%
28%
41%
NEVER CONSIDERED OR SEEN AS VERY MINOR
IT WAS GIVEN SOME CONSIDERATION
WAS SERIOUSLY CONSIDERED, BUT BENEFITS > RISK

Part 3 – Significant Correlations Among Variables with Correlations Greater or Equal to .30

Table 14

Variable		**Tool 2: Revenue minus Direct Expenses**	**Action 3: Reduce Services**
Action 1: Increase Prices	Pearson Correlation	.310**	
	N	243	
Action 4: Change Product or Sales Mix	Pearson Correlation		.303**
	N		243

As illustrated in Figure 18, there was practically no correlation among the variables. The only minimal correlation worth noting was between Changing the Product or Sales Mix to an unprofitable customer, and Reducing Services to an unprofitable customer (Pearson = .303, p = .01). I interpret this correlation as a matter of sound Customer Profitability Management. An organization which takes Customer Profitability Management seriously will consider the less common actions of Reducing Services or Changing the Product or Sales mix. There was also a minimal correlation between using Revenue minus Direct Expenses to measure customer profitability, and increasing prices to unprofitable customers. However, I believe this correlation is predictable, because Revenue minus Direct Expenses is a very basic measurement tool, which commonly is used by most businesses to measure profitability. Sixty-three percent of the respondents in the study use Revenue – Direct Expenses to calculate profitability. The second most commonly used measurement tool, including Indirect Expenses, is only used by 28% of respondents.

Part 4 – Overall Summary and Commentary

The purpose of this study was to determine:

1. How do businesses measure individual customer profitability?
2. What do businesses do about an unprofitable customer?

Overall, I believe these findings suggest that small to medium size businesses outside of Retail, are aware that some customers could be unprofitable, and spend some time & effort measuring and managing customer profitability. However, their efforts are often informal and do not apply comprehensive measurement tools.

It is understandable that small to medium size businesses cannot or do decide not to take the time and effort to extensively measure customer profitability. These businesses may not have the time, staff, or informational tools to do so.

Regarding what should be done with unprofitable customers, the common course of action (52%) was to raise prices. That is not surprising as it the easiest course of action. The finding which is surprising is once a customer is determined to be unprofitable, how often businesses will take the course of action at the two opposite ends of the spectrum. Almost one-third (31%) of businesses will fire an unprofitable customer. On the other end of the spectrum, over one-sixth of businesses will take no action to deal with an unprofitable customer.

This study adds to the body of knowledge in an unexplored area of business, measuring individual customer profitability and managing unprofitable customers. There have been publications which discuss individual customer profitability in general terms. There have been publications which propose theoretical models for measuring customer profitability. However no existing study has provided data regarding if organizations measure customer profitability, how often they measure customer profitability, how they measure customer profitability, and what action(s) are taken if a customer is determined to be unprofitable. Furthermore, the data provided by this study is broad-based. It was collected from 243 organizations, in six different categories of sizes, and from nine different SIC industry divisions.

Limitations on Research

As with all survey research, in order to get an adequate number of responses the survey was anonymous and designed to be quick. Although this provides more responses, the data provided by the survey does not go into depth. In addition, to the lack of depth of the data, follow-up questions were not be possible. For example, the results show that 61% of respondents believe their organization measures individual customer profitability Fairly Accurately or Very Accurately. However, when calculating customer profitability, most of the respondents only include Revenue and Direct expenses. Only 28% of respondents include Indirect Expenses. Only 13% and 7% use Activity Based Costing and calculate the Customer Lifetime Value, respectively. The confidence of respondents in the accuracy of their measurements, seems to contradict omitting or ignoring the indirect costs of serving their customers. It would be interesting to ask respondents why they believe their customer profitable measurements are accurate without including Indirect Costs. Perhaps these respondents would have an "ah-ha" moment, and realize they excluded a significant factor of customer profitability. Or perhaps the respondents would show how customer profitability is accurate without indirect costs, which could greatly reduce the time and effort needed to calculate customer profitability.

Implications of this study for businesses

The results of this study could be interpreted as B2B organizations are spending some time and effort to measure individual customer profitability, but not enough. Most of the respondents are aware of customer profitability and measure it. However, it is not measured with sufficient frequently or accurately. Therefore, all B2B organizations would be well-advised to develop procedures or fine-tune existing procedures for measuring customer profitability. Once such procedures are in place, they should be followed so that customer profitability is reviewed as frequently as Customer Accounts Receivable Aging. An unprofitable customer can be an open window in a house which one is trying to heat during the winter. If the situation with unprofitable customers is severe enough, they will become a hole in a row boat, which is a long distance from shore.

Future Research

This was a descriptive, exploratory study. Such studies are usually a first step in researching any topic or area of interest. Future researchers in this area might consider:

1. Researching what happens when a business unilaterally terminates its relationship with an unprofitable customer. Were the results positive for the business?
2. Including very large organizations. LexisNexis Academic provided over 99% of all potential respondents. This list of potential respondents were executives from businesses for which LexisNexis Academic had email addresses. Although there was no effort or intent to choose small to mid-size businesses, only 9% of the potential respondents were from organizations with annual revenue of $100 million to $500 million. Organizations with revenues over $500 also only represented 9% of potential respondents. One might assume that larger organizations would have more resources to measure individual customer profitability measurements, and therefore are more likely to do so with a high level of sophistication and accuracy.
3. Conducting surveys which collect more detailed SIC information from respondents. According to https://siccode.com, there are just over 1,000 SIC codes. SIC codes

assigned to an organization has four digits and four levels of industry specificity. For example, SIC Code 1521 is for *General Contractors – Single Family Houses*. The first level is the organization's Division. The second level is an organization's major group. The third level is an organization's major industry group. The fourth level is the organization's industry. This study only tracked an organization's first SIC level, its SIC Division. If a study traced the four-digit code of a respondent's organization as well as its revenue size, it would be possible to pinpoint which industries and which size organizations use Customer Profitability Measurements. Taking that data one step further, one might speculate that individual customer profitability measurement is most beneficial to the industries and to the size organizations in which it already has a high level of usage.

4. Researching how individual organizations measure individual customer profitability in detail, and the benefits for an organization. Collecting this data could probably be done through case studies. One of the last questions on the survey asked the participants if they wanted a copy of the results. The eighty-seven respondents (36%) who completed a survey, asked for a copy of the study's results. These respondents would be a potential source of participants for future case studies.

Table 15 - Descriptive Statistics

Question # on Survey	Variable	N	Minimum	Maximum	Mean	Standard Deviation
2	**Frequency**	212	1	4	2.75	1.22
1	**Accuracy**	210	1	5	3.85	0.96
4	**Tool 1: Revenue**	243	0	1	0.05	0.26
4	**Tool 2: Revenue minus Direct Expenses**	243	0	1	0.63	0.48
4	**Tool 3: Allocate Indirect Expenses**	243	0	1	0.28	0.45
4	**Tool 4: Activity Based Costing**	243	0	1	0.13	0.33
4	**Tool 5: Customer Lifetime Value**	243	0	1	0.07	0.26
4	**Tool 6: Net Promoter Score or Customer Residual Value**	243	0	1	0.02	0.16
5	**Criteria 1: Net Profit < zero**	243	0	1	0.46	0.50
5	**Criteria 2: Net Profit < Company Guideline**	243	0	1	0.28	0.45
5	**Criteria 3: Future Profit**	243	0	1	0.24	0.43
5	**Criteria 4: No Sales Referrals**	243	0	1	0.05	0.23
5	**Criteria 5: A lot of Judgement**	243	0	1	0.30	0.46
6	**Action 1: Increase Prices**	243	0	1	0.52	0.50
6	**Action 2: Charge for Special Services**	243	0	1	0.21	0.41
6	**Action 3: Reduce Services**	243	0	1	0.14	0.34
6	**Action 4: Change Product or Sales Mix**	243	0	1	0.27	0.44
6	**Action 5: Fire Customer**	243	0	1	0.31	0.46
6	**Action 6: Take No Action**	243	0	1	0.17	0.38
7	**Fire Customer - worried about negative publicity?**	201	1	3	2.10	0.84
8	**Organization's Revenue**	240	1	5	2.57	1.23

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Appendix – Survey

1. How accurately do you think your organization measure**s** the level of profitability by customer (each customer individually)?
   A. Very Accurately.
   B. Fairly Accurately.
   C. Somewhat Accurately.
   D. Inaccurately.
   E. Not at all accurate,
   F. Customer profitability is not measured.

2. How frequently does your organization evaluate the level of profitability by customer (each customer individually)?
   A. Monthly.
   B. Quarterly.
   C. Yearly.
   D. Ad hoc, not regularly done.
   E. Not within the last 12 months.

Note - if the respondent answers "E-not within the last 12 months", the remaining questions regarding customer profitability (3 through 7) will be skipped. The Respondent's next questions will be #8. "What is the revenue of your organization?".

3. Which departments/functions in your organization reviews the level of profitability by customer (each customer individually)?
   A. All or mostly Accounting and Finance.
   B. All or mostly Sales and Marketing.
   C. Both Accounting/Finance and Sales/Marketing together.
   D. Account Management function.
   E. Other.

4. What tools does your organization use to measure the profitability by customer? Check all that apply.
   A. Only the Revenue from the customer. No expenses or other criteria are used to measure profitability.
   B. Revenues from the customer minus the direct cost of goods and services to the customer.
   C. Allocate indirect expenses such as customer service, delivery, sales effort, or marketing, using a method OTHER than Activity Based Costing (ABC)?
   D. Activity Based Costing (ABC) to allocate indirect expenses such as customer service, delivery, sales effort or marketing.
   E. Customer Lifetime Value (CLV).
   F. Net Promoter Score or Customer Referral Value.

5. What factors/criteria are considered, before classifying a customer as unprofitable? Check all that apply.
   A. The Net Profit for the customer (Direct Revenues – Direct Cost of Goods and Services) was less than zero.
   B. The net profit from the customer was less than a company guideline. For example, a net profit of less than $1,000 a year or a net loss of more than $5,000.
   C. Future customer profitability. Believe the customer will be unprofitable in the future.
   D. Did not anticipate any future referrals or publicity from the current customer, which could lead to sales from new customers.
   E. Use a lot of "judgement".

6. When your organization identifies an unprofitable customer, what actions are taken? Check all that apply?
   A. Increase the price(s) your organization charges the customer for your goods or services.
   B. Add fees for costs of special services or requirements demanded by the customer.
   C. Reduce services to the customer to lower the cost to serve the customer.
   D. Change the product and service mix to the customer to increase profitability.
   E. Terminate the relationship with the customer.
   F. Take no action, accept the situation as is.

7. If your organization terminated a relationship with an unprofitable customer, how much of a consideration was the possible negative word-of-mouth or negative publicity?
   A. Never considered or seen as very minor.
   B. It was given some consideration.
   C. It was seriously considered. However, it was decided the benefits of ending the relationship, were worth more than the costs or risks.

8. What is the annual revenue of your organization?
   A. up to $10 million.
   B. $10 million to $50 million.
   C. $50 million to $100 million.
   D. $100 million to $500 million.
   E. over $500 million.

9. In what industry is your organization?
   Fill in the blank

10. Would you describe your organization as business to business (B2B)? Or business to customer (B2C)?
    A. B2B.
    B. B2C.
    C. Combinations of B2B and B2C.

11. In what department/function of your organization, do you work?
    A. Accounting and Finance.
    B. Sales and Marketing.
    C. Other.

12. How would you describe your organization?
    A. Manufacturer
    B. Service
    C. Distributor/reseller/retailer
    D. Other.

13. How would you describe your level in the organization?
    A. Senior or Executive Management.
    B. Mid-Level Manager.
    C. Staff Level.