USING FINANCIAL RANKINGS TO IDENTIFY CHARACTERISTICS OF LIBRARIES SERVING HIGHLY PROFITABLE PRIVATE LAW FIRMS

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This purpose of this study was to develop evidence of a relationship between law libraries and private law firm profitability for law library administrators to use when making strategic decisions that influence the value of their libraries. The highest ranked administrator at each private law firm listed on the 2008 Am Law 200 was invited to complete an online benchmarking survey. The adjusted sample population totaled 179 firms. Fifty-one valid surveys were completed for a 28.5% response rate. Descriptive and statistical analyses were conducted using 26 independent variables (law library characteristics) and a single dependent variable, Revenue per Equity Partner, developed from data published for the Am Law 200.

The most significant contributions of this study are: development of important law library financial and return on investment benchmarks; a listing of characteristics that have been empirically shown to impact law firm productivity; identification of optimum reporting structure for the law library administrator.

Six characteristics positively impact Revenue per Equity Partner: to whom the library Administrator reports, number of library staff per library, number of Library staff per library, range in hourly bill rate for library staff time, practice areas most often supported. Two monetary measures were also established.
The cost benefit of an Am Law library to its firm is $1.00 : $1.68. Each Am Law Library staff member is worth $295,000 in Revenue per Equity Partner to a firm.

Law library practitioners can use the results to support evidenced-based strategic decision making in the administration of any private law firm library. Faculty and students in law librarianship programs will have a greater understanding of how to manage law libraries and collections to provide maximum value to their law firms.

Benefits to library and information science research include validation of the research design and benchmarking as a theoretical framework for conducting research into ways libraries can deliver value and return on investment to their sponsors. This research design can be generalized and replicated in future studies. It demonstrates how rank can be used to operationalize relative measures of value for research purposes.

Findings from future studies in both for-profit and non-profit settings using appropriate measures of rank may form the basis for development of a theory concerning the relationship between a library and their sponsor’s success.
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by

Margaret Aby Carroll
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CHAPTER 1

INTRODUCTION

Pressure to be a performing asset impacts a library the same as any division in a for-profit organization. Since 1906 library administrators have sought to evaluate and eventually to value their libraries for their sponsoring organizations (Hiller & Self, 2004). The current diversity of valuing methods and ongoing discussion about what to measure and how to communicate value indicate the importance of library value but show little agreement as to best practices for delivering library value.

This purpose of this study was to develop detailed evidence of a relationship between law libraries and private law firm profitability for law library administrators to use when making strategic decisions that influence the value of their libraries. The kind of evidence sought was those characteristics of libraries serving the top grossing private law firms related to firm rank, a financial measure of profitability. Rankings have been successfully used to identify differences between characteristics of libraries serving higher ranked organizations and lower ranked organizations (Pagell & Lusk, 2002; Jones, 2007). This study sought not to determine the economic value of various library characteristics but to learn which characteristics relate to law firm net profitability so they can be adopted by law library administrators wishing to increase the value of their library’s contribution to firm bottom line.

Characteristics of law libraries serving the 200 highest grossing private law firms in the United States, the Am Law 200, were first compared to law library industry benchmarks to establish that libraries serving Am Law 200 law firms were different from the average private law firm library. The Am Law 200 list, compiled annually since 1984
by Incisive Media, Inc., is a rank, according to gross revenue, of the most profitable private law firms headquartered in the United States. Further investigation was conducted to determine which law library characteristics were significantly related to a private law firm’s profitability where the ranking was the measure of profitability.

The legal industry is an appropriate population for this study for several reasons. First, the legal profession is inherently information-intensive. It is comprised principally of knowledge work, “those jobs in which the creation, distribution or application of knowledge are the primary aspect of the role” (Davenport, Thomas, Cantrell & De Long, 2002, p. 2), and knowledge workers whose primary professional function is gathering and using information or knowledge (Cortada, 1998 - attributed to Peter Drucker, 1959). Lawyers’ productivity and efficiency is greatly influenced by the confidence they have in the information they use (Curle, 2009). Knowledge workers’ productivity gains are more likely to be produced by efficient and effective management of information than for workers in non-information intensive industries (Bearman, Guynup & Milevski, 1985; Harris & Katz, 1991). Law firms are early but slow adopters of knowledge management practices which consolidate management of the firm’s information environment to improve organizational performance and productivity. A final reason is that financial data and rankings of highly profitable private law firms are readily available in the public domain. Most private law firms are organized as partnerships which are not required to publically divulge financial data.

Background to Study

Proving the worth of information services to a library’s sponsoring organization has always been difficult due to the intangible nature of a library’s value and the use of
archaic accounting systems that consider tangible or physical assets rather than intangible ones (Portugal, 2000). Contemporary library management has embraced best practices benchmarking, a quality management technique used to find the “epitome of excellence,” to achieve superior performance as a way to gain a competitive advantage (Camp, 1989, p. 10). The American Productivity and Quality Center (1995, p. 1) defines benchmarking as “the process of improving performance by continuously identifying, understanding, and adapting outstanding practices and processes found inside and outside the organization.” Benchmarking serves as the theoretical framework for the design of this research study.

The Legal Environment

In the United States, the practice of law began in colonial times. Work was done principally by lawyers in solo or small partnership settings using the lawyer’s personal collection of legal information resources. To become a lawyer one literally read the law. Private law firms date to the nineteenth century when lawyers first opened offices separate from their homes. In the 1970’s private law firm partnerships began to grow substantially (Berring, 2007). Today private law firms may have many locations. Each may have a unique regional, industry or practice area focus (Zimlicka, 2009) although a firm wide practice focus approach without regard to geography is being adopted by many firms.

Competition among private law firms headquartered in the United States is intense. According to the latest statistics from the American Bar Foundation (2004), there are 47,563 law firms and 1.18 million licensed lawyers. To remain viable law firms must compete against peers to give clients “better, faster and cheaper legal services”
New technologies, the Internet and effective marketing have enabled small ‘boutique’ firms that specialize in very limited practice areas and multi-disciplinary practices with location-based specialties to compete effectively for clients against ‘mega-firms’. Mega firms have 1,000+ lawyers, offices on several continents, a bill rate ≥ $750 per hour, and a high ratio of support staff to lawyers (Trotter, 1997).

The Legal Information Environment

Even before the formation of the United States the private law library existed because practitioners of law depended on law books to conduct their day-to-day business. Law firm libraries evolved from these personal collections of law books owned by justices and lawyers. At the time of the American Revolution, the average private law library contained 10 to 20 books or as many as a lawyer could afford (Chandler, 1993).

There are three types of private law libraries: libraries serving corporations; libraries serving bar associations or federal agencies, and libraries serving private law firms. For this study, law libraries were defined as those serving only private law firms.

The modern private law firm library dates from the early 1900s. The first law librarian, a clerk trained at Columbia University Library, was hired by the New York firm of Cravath in 1899 (Berring, 2007). The American Association of Law Librarians, hereinafter referred to as AALL, listed its first private law firm member in 1920. By 1939 there were still only two private law firm librarian members. According to recent American Association of Law Librarian (AALL) membership statistics, 36.8% (n = 1695) of the 4,606 members work in private law firm libraries (2009-2010 AALL Directory & Handbook, p. 544).
Private law firm libraries are an integral part of the practice of law in firms. Law firms now have a network of libraries with targeted collections based on practice areas and location. An Am Law 200 firm typically has libraries at 44% of its locations according to the 2008 Am Law 200 law librarians survey. This survey has been conducted annually since 2002 by Incisive Media, Inc., the same research firm who compiles the Am Law 200 rankings.

Law librarians contribute to firm revenue in several ways. Experienced library staff offers legal research support and other information services for attorneys, law clerks, paralegals, and staff. Law librarians’ work is often charged to clients as a source of billable hours. They find information needed to complete legal transactions for lawyers, thereby freeing the lawyer’s time to increase his billable hours. Legal research is augmented by non-legal information services such as market research and competitive intelligence work to support client development. Law library staff contributes to firm knowledge management initiatives.

Expense incurred in the creation, acquisition and management of legal information assets represent strategic investments. These investments require careful consideration and a factual basis as to their usefulness to a law firm’s practice to obtain senior management endorsement and facilitate adoption across the firm.

Knowledge Management and Law Libraries

Knowledge management (KM) has numerous definitions. Townley (2001) defines it as the set of processes that create and share knowledge across an organization to optimize the use of judgment in the attainment of mission and goals. All definitions essentially describe the consolidation and centralized management of an
organization’s information environment to ultimately support improved performance and productivity.

Knowledge management has been correlated to performance improvements (Edvinsson, 1977; Marr, Schiuma, & Neely, 2004) and recognized as a source of competitive performance (Nonaka, 1991; Davis & Botkin, 1994). Forstenlechner, Lettice, and Bourne (2009) were able to establish a link between knowledge management and firm financial performance in a recent case study of one of the world’s three largest law firms. The key predictor for fee income was value perception of firm knowledge management services with personal service from the knowledge management team as the key predictor for value perception.

Statement of the Problem

At the present time there is no evidence of which law library characteristics are most likely to impact firm profitability. Law library administrators have little evidence on which to base strategic decisions about library management and operations to maximize the firm’s return on investment in the library. This study is the first to determine which characteristics positively impact a private law firm’s profitability. Law firms, like any for-profit service business in a highly competitive environment, maintain market share and revenue levels through cost controls, productivity (process and workflow) improvements, and business development. Pressure to control costs and boost revenue is constant. For law libraries, that pressure translates to a relentless need to demonstrate value – to operate effectively (doing the right things) and efficiently (doing things well) to maximize productivity and return on investment in information services to the firm.
Purpose of the Study

1. To determine if libraries serving the most profitable private law firm libraries are different from other law libraries by comparing characteristics of law libraries serving the 200 highest growing private law firms (Am Law 200) and private firm law library industry benchmarks.

2. To determine which characteristics of the Am Law 200 law libraries are most likely to affect a private law firm’s profitability.

3. To determine if law libraries at highly profitable private law firms (Am Law 200) are more likely to participate in law firm knowledge management and, if so, in which activities they are most likely to participate.

Research Questions

The purpose of the study formed the basis for the research questions. The dependent variable is the financial measure, Revenue per Equity Partner. Criteria for selection of law library characteristics to serve as independent variables for this study were: frequency with which a characteristic appeared in prior studies of law libraries and relevance to the hypotheses, i.e., could this characteristic impact profitability and, if so, is financial rank a factor? Characteristics selected to answer the questions were grouped according to three categories: Law Library Administrator and Staff, Law Library Management, and Law Firm Knowledge Management Activities. Not all independent variables were used to answer each research question. Research questions and the independent variables used in answering each are listed below.

Research Question 1 (Q1) - To what extent do characteristics of law libraries serving the 200 highest grossing private law firms headquartered in the United States
(Am Law 200) and private firm law library industry benchmarks for these characteristics differ?

Law Library Administrator and Staff

1. To whom the library director/head/manager reports.
2. Departments managed by the library administrator in addition to the library.
3. Staff education.
4. Staff professional development opportunities.
5. Size of library staff.
6. Staff years of experience.
7. Ratio of library staff to lawyers
8. Ratio of professionals to library technical/support staff.

Law Library Management

9. Information services offered.
10. The law library’s role in its firm's website, Internet or intranet.
11. Total number of libraries at all firm locations.
12. Library staff yearly average hours client billed hours.
13. Library staff billing rate.
15. Budget per lawyer.
16. Participation in blogs, wikis, or social networks.
17. Outsourcing activities.
18. Law firm wants to downsize library.
19. Law firm aggressively support library.
Law Library Knowledge Management Activities

20. Top three law firm's knowledge management objectives.


22. The library’s role in firm knowledge management activities.

Research Question 2 (Q2) - To what extent are law library characteristics a factor in Revenue per Equity Partner rank, a measure of law firm profitability?

Characteristics selected to answer this question were:

Law Library Administrator and Staff

1. To whom the library director/head/manager reports.

2. Departments managed by the library administrator in addition to the library.

3. Staff education.

4. Staff professional development opportunities.

5. Size of library staff.

6. Staff years of experience.

7. Ratio of library staff to attorneys.

8. Ratio of professionals to library technical/support staff.

Law Library Management

9. Information services offered.

10. The law library’s role in its firm's website, Internet or intranet.

11. Total number of libraries at all firm locations.

12. Library staff yearly average hours client billed hours.

13. Library staff billing rate.

15. Budget per lawyer.

16. Participation in blogs, wikis, or social networks.

17. Outsourcing activities.

18. Law firm wants to downsize library.

19. Law firm aggressively supports library.

20. Data collected to demonstrate value to the firm.

21. Method used to communicate value to practice management.

22. Categories of library collection content.

23. Law firm practice areas for whom the library does the most work.

Law Library Knowledge Management Activities

24. Top three law firm’s knowledge management objectives.

25. Knowledge management strategy.

26. The library’s role in firm knowledge management activities.

Research Question (Q3) – To what extent do characteristics of law libraries serving the highest and lowest ranked Am Law 200 firms differ when ranked on the basis of Revenue per Equity Partner?

Characteristics selected to answer this questions were:

Law Library Administrator and Staff

1. To whom the library director/head/manager reports.

2. Staff professional development opportunities.

Law Library Management

3. Size of library staff per library.

4. Total number of libraries at all firm locations.
5. Library staff billing rate.
6. Annual budget per library.

Research Question (Q4): To what extent are private law firm profitability and law library participation in firm knowledge management activities related?

Characteristics used to answer this question were:

Law Library Knowledge Management Activities
1. Top three law firm's knowledge management objectives.
2. Knowledge management strategy.
3. Law library knowledge management activities.

Hypotheses

There were one major and two minor hypotheses tested in the study.

Major Hypothesis

There is no significant difference in the characteristics of law libraries serving the highest ranked private law firms and characteristics of law libraries serving the lowest ranked private law firms in the 200 highest grossing private law firms in the United States, the Am Law 200, where rank is based on a financial measure of relative profitability.

Minor hypotheses

1) There is no significant difference in characteristics of law libraries serving the Am Law 200 and other private law firm libraries.

2) There is no significant difference in participation in law firm knowledge management activities by law libraries serving the highest ranked private law
firms and law libraries serving the lowest ranked private law firms in the Am Law 200 according to Revenue per Equity Partner (RPEP).

Basic Assumptions

It is assumed that a law library administrator will be able to answer all questions in the survey using composite data for all of their firm’s libraries and information services. It is assumed that all of the target survey law firms offer their employees access to a computer, to email and to the Internet so a web-based survey delivered by email can be received and completed. It is assumed that the law library administrator at each firm on the Am Law 200 list is a member of either the American Association of Law Libraries, the premier professional association for law librarians in the United States founded in 1906, or the Special Libraries Association founded in 1909 – Legal Division (established in 1993), the premier professional association for all special librarians whose primary interest is law librarianship. Special libraries serve corporations or medical or legal institutions, but can be any library not otherwise considered a school library (K-12), academic library (college or university setting), or public library.

Definitions

For the purpose of this study, the following definitions were used:

Benchmark: An industry standard for a law library characteristic developed from multiple research studies on law libraries over a period of time.

Benchmarking: The process of improving performance by continuously identifying, understanding, and adapting outstanding practices and processes found inside and outside the organization (American Productivity & Quality Center, 1995).
Cost Benefit Analysis: A valuation method that determines the ratio of benefits to the cost of an item or service, i.e. cost divided by benefit (Matthews, 2002; Chung, 2007).

Equity Partner: A lawyer who files a Schedule K-1 IRS tax form and receives no compensation on a fixed-income basis, as opposed to a non-equity partner, a lawyer that receives more than half their compensation on a fixed basis (Clancy & O’Connor, 2008).

Gross Revenue: Fee income from legal work only excluding disbursements or income from non-legal ancillary businesses for a firm’s most recent fiscal year and rounded to the nearest $500,000 (Clancy and O’Connor, 2008).

High Revenue per Equity Partner (HRPEP): A designation assigned to the group of law firms participating in the study with a Revenue Per Equity Partner in excess of $2,400,000, the mean Revenue Per Equity Partner of all survey respondents. Firms in the HRPEP group are more profitable and have a higher rank than those who are not in this group.

Industry Standard (IS): The most current descriptive (or numerical) representation of a law library characteristic as reported in recurring authoritative research such as the Primary Research Group’s Law Library Benchmark studies or the AALL Biennial Salary Survey & Organizational Characteristics.

Intellectual Capital: Knowledge that exists in an organization that can be used to create differential advantage; the difference between the market and book value of an organization (Stewart, 1997).
Intellectual Capital Valuations: A valuation method that uses metrics from four categories – user focus, process focus, R & D focus and human focus to measure overall strength of library activities (Portugal, 2000). The “balanced scorecard” valuation model is based on this method.

Intangible Asset: Nonphysical property of an organization including research and development, patents and other intellectual property, training and development, brand names, and internally developed software (Matthews, 2002).

Knowledge: The value-added content of human thought derived from perception and intelligent manipulation of information OR – arising from information combined with the experience, values, context, and expertise of organizations’ employees. It can be embedded in documents but is also found in routines, processes, practices, and norms (Matthews, 2002).

Knowledge Management: The set of processes that create and share knowledge across an organization to optimize the use of judgment in the attainment of mission and goals (Townley, 2001); a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizational performance (O’Dell & Grayson 1998); “an emerging set of strategies and approaches to create, safeguard, and use knowledge assets (including people and information), which allows knowledge to flow to the right people at the right time so they can apply these assets to create more value for the enterprise” (Hasanali, 2002, p.1).
Knowledge Work: Those jobs in which the creation, distribution or application of knowledge are the primary aspect of the role (Davenport, Thomas, Cantrell, & DeLong, 2002, p. 2).

Knowledge Workers: Workers whose primary professional function is gathering and using information or knowledge (Cortada, 1998 - attributed to Peter Drucker, 1959).

Law Library Administrator: The person to whom all law library personnel directly or indirectly reports.

Low Revenue per Equity Partner (LRPEP): A designation assigned to the group of law firms participating in the study with Revenue per Equity Partner less than $2,400,000, the mean Revenue per Equity Partner of all survey respondents. Firms in the LRPEP group are less profitable and have a lower rank than those who are in the High Revenue per Equity Partner (HRPEP) group.

Non-Equity Partner: A lawyer that receives more than half their compensation on a fixed basis as opposed to an equity partner, a lawyer who files a Schedule K-1 IRS tax form and receives no compensation on a fixed-income basis (Clancy & O’Connor, 2008).

Private Law Library: For the purposes of this study, a library whose primary user population is attorneys, clerks, paralegals, and staff of the privately held law firm or offices that fund the library.

Return on Investment (ROI): The ratio of net profits to total assets (Matthews, 2002).

Revenue per Equity Partner (RPEP): Calculated by dividing a law firm’s gross revenues by the number of equity partners (Gibson, 2002).
Revenue per Lawyer (RPL): Calculated by dividing a law firm’s gross revenues by the number of lawyers (Clancy and O’Connor, 2008).

Senior Law Library Administrator: The person who reports in at the highest organizational level of all information services staff and to whom all law library personnel directly or indirectly reports.

Significance of the Study

No research has determined which characteristics of law libraries serving the Am Law 200 are most likely to impact law firm profitability. Important implications of the study findings are:

Law Librarianship - The information management, operations, and services at highly profitable private law firms can be used by law library staff as the basis for strategic decision making in the administration of any private law firm library.

Value - Identification and adoption of law library best practices that contribute to private law firm profitability can improve a law library and the law librarian’s value. Prior research has already established a link between information and organizational productivity and organizational productivity and libraries. Law librarians can better communicate their value to law firm management using methods employed by law libraries serving highly profitable private law firms.

Knowledge Management - A law library administrator will know which knowledge management activities contribute to a law firm’s productivity and profitability.

Law Library Management Education - Faculty and students at law librarianship programs will have a greater understanding of the law libraries. This study can contribute to law library management education by identifying which library
characteristics of law libraries at highly profitable private law firms are likely to have the greatest impact on law firm profitability.

Library and Information Science Research - This study validates the combination of qualitative and quantitative approaches to conducting research. It also specifically validates the use of benchmarking as a theoretical framework for research which can be generalized and replicated in future studies. It demonstrates how rank can be used to operationalize relative measures for research purposes.

Limitations of the Study

This study was of libraries in a single knowledge intensive industry -- private law firms -- headquartered in the United States. The research design required a study population of only the most profitable law firms, so the study was limited to an accessible population of the 200 highest grossing private law firms (the 2008 Am Law 200) as listed in the May and June, 2008 issues of the journal American Lawyer. Only one response from each firm was solicited. Survey participants were limited to members of AALL (American Association of Law Libraries) and the legal division of the Special Libraries Association since these associations’ directories served as the source of contact data. The American Association of Law Libraries, formed in 1906, is the principal professional association of law librarians in the United States. The Special Libraries Association (SLA), formed in 1909, is the principal professional association of special librarians. SLA’s legal division, established in 1993, is the forum for the exchange of information, ideas, and knowledge among law and regulatory affairs librarians. Special libraries are defined as those libraries not otherwise classified as school (K-12), academic (college and university) or public. Firms for which no contact
information could be found for any library staff person from either organization were excluded from the survey.

A single legal industry financial measure, Revenue per Equity Partner (RPEP), was used as the basis of law firm rank and chosen as the dependent variable for this study. The larger the financial measure number, the higher the ranking, the more profitable and productive the law firm. Placement of a law firm into the higher or lower rank was based on the mean of the selected financial measure – Revenue per Equity Partner for all survey participants ($2,400,000).

Survey results were based on self-reported data. Respondents were asked to answer survey questions using aggregate data from all firm libraries since the dependent variable was a financial measure of the entire firm’s profitability.

Summary

This chapter introduces the proposed study, the concept of ranking as a relative measure of profitability, selection of the study subject industry, and benchmarking as the theoretical framework on which the study was based. The current legal and the legal information environments leading to the research questions and resulting hypotheses are discussed. The purpose and significance of the study are articulated as is potential limitations of the study. Definitions are included to aid the reader’s review of this study. In Chapter 2, a review of the literature from multiple disciplines discusses the importance of and need for library value, profitability and benchmarking, the legal and legal information environments, law library research and knowledge management.
CHAPTER 2
REVIEW OF RELATED LITERATURE

Introduction

In this chapter, a review of selected literature from the disciplines of law, law librarianship, library and information science, business management science, economics, and knowledge management as it relates to this study is presented. The concepts of knowledge economy, knowledge work and knowledge workers, and productivity precede this review to assist the reader with understanding the present socio-economic environment.

The review is divided into four principle subject areas. In section one of this chapter productivity is defined as an economic measure of value. A review of the information environment in highly productive organizations establishes the link between information and profitability. Benchmarking is defined, its use in law libraries summarized, and the suitability of benchmarking as the theoretical framework for conducting this study explained.

Section two traces attempts to evaluate and measure library performance and the evolution of library valuation. The link between a library and its sponsor’s productivity is examined by reviewing efforts to calculate the economic value of information as a productivity factor.

In section three, a discussion of law firms and law libraries illustrates private law firm suitability for this study. Research on law libraries is summarized. Benchmark standards established for characteristics of law library staff, private law firm libraries and
knowledge management activities in this body of research are the inspiration for the law library characteristics selected as this study’s independent variables.

Section four describes the field of knowledge management, its adoption by and impact on productivity in private law firms. The link between a law library's knowledge management activities and a law firm’s productivity and profitability improvements is established.

Knowledge Work, Knowledge Workers, and Productivity

The information age (1951 CE –) represents a society that has transitioned from producing goods (manufacturing) to a service (information) economy (Bell, 1979). Theoretical knowledge, technology, and information are the information economy’s principle raw materials.

The term ‘knowledge workers’ was coined in 1959 by Peter Drucker to describe individuals whose primary professional function was gathering and using information or knowledge. Drucker predicted “the basic economic resource…is and will be knowledge” (1993, p.7) and that knowledge workers and their productivity would be the most valuable asset of any 21st century institution. Knowledge workers are the largest segment (60%) of workers currently employed in the United States (U.S. Census Bureau, 2005-2007 American Community Survey).

“It would be difficult to overstate the importance of focusing on knowledge workers’ productivity because knowledge workers are ‘capital’ rather than labor” (Drucker, 2002, p. 12). Capital denotes an asset as referred to by Drucker and is defined as “… any form of wealth employed or capable of being employed in the
production of more wealth” (Unabridgeddictionary.com). It is knowledge workers’ intellectual capital to which Drucker specifically refers.

The concept of intellectual capital, “knowledge that exists in an organization that can be used to create differential advantage” was introduced by Thomas Stewart in *Intellectual Capital: The New Wealth of Organizations* (1997, p. 31-32). Developed by employees through their work experiences, intellectual capital includes implicit knowledge and explicit knowledge. Implicit knowledge is the know-how and contextual cues that reside in knowledge workers’ heads. Explicit knowledge is knowledge that has been codified and reduced to writing in the form of policies and procedures.

Six factors have been shown to determine knowledge-worker productivity though the first is deemed most significant (Drucker, 1999a):

1. The nature and definition of the task
2. The presence of self-management or autonomy resulting in knowledge worker responsibility
3. Innovation is an integral part of the knowledge work
4. The knowledge worker continuously learns and continuously teaches
5. Quantity and quality are considered equally important in assessing a knowledge worker’s productivity
6. The employer is a desirable place to work and treats knowledge workers as assets rather than costs
Productivity and Benchmarking

Productivity

Productivity is defined as “a concept that expresses the relationship between the quantity of goods and services produced—output, and the quantity of labor, capital, land, energy, and other resources that produced it—input” (Bearman, Guynup, & Milevski, 1985, p. 371). This definition evolved from the field of economics during World War II but was not published as an accepted economic measure until 1959 (Hack, n.d.).


<table>
<thead>
<tr>
<th>Output</th>
<th>Input</th>
</tr>
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<tbody>
<tr>
<td>Gross Revenues</td>
<td>No. of Equity Partners</td>
</tr>
<tr>
<td>Partners Profit</td>
<td>Revenues</td>
</tr>
<tr>
<td>Productivity = ___________</td>
<td>X</td>
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<tr>
<td>(Revenue per Equity Partner)</td>
<td>Input</td>
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</table>

Figure 1. Modified bureau of labor statistics productivity formula

This formula was also used by Sink who states, "Productivity…is strictly a relationship between resources that come into an organizational system over a given period of time and outputs generated with those resources over the same period of time" and, “it is most simply Output divided by Input” (1984, p. 1279). Conversely
Schreyer (2001) believes there is not a single measure of productivity but numerous objectives of productivity measure. Sardina and Vrat (1987) outline twenty business related definitions of productivity. Forte (1992) cites a Bureau of Labor Statistics productivity study covering 64% of the federal executive branch civilian workforce to illustrate multiple interpretations of productivity measurement. This study uses the Bureau of Labor Statistics’ formula, output divided by input, to define productivity.

Productivity serves as the theoretical construct for this study. It is important to this study because high productivity is associated with competitive advantage which can ensure an organization’s viability and sustainable market share (Stewart, 1997). An organization could expect to positively impact its productivity and resulting profitability by identifying and effectively managing contributors to its productivity. A link between information and organizational productivity and between organizational productivity and the existence of a library has been established through research across disciplines as diverse as economics, the social sciences, engineering, and library and information science (Koenig, 2000). Structuring strategic decision-making around contributions to productivity offers the law library administrator a strong foundation from which to successfully negotiate for firm resources.

Organizations differ in their ability to produce productivity gains from information resource investment. Industries considered information intensive, such as legal or financial services are more likely to improve their productivity than non-information intensive ones such as the manufacturing sector (Harris & Katz, 1991). This was a factor in choosing the legal industry as the subject for this study. Koenig (1999, p. 80) cites an “extensive literature that indicates very strongly that access to information is a
very critical component of the productivity of information workers and consequently the productivity of the information dependent organization employing those persons.”

Davenport (2002) and Drucker (1999b) agree the foremost priority for management in the 21st century is to manage performance improvements to increase productivity of those knowledge workers central to a firm’s strategy.

Internal and external factors affect a firm’s productivity gains. Internal factors may include top management’s commitment, a firm’s prior experience with information resources, satisfaction with information investments, and firm politics. External factors can include the marketplace, a firm’s financial standing prior to the investment, and the firm’s size and ability to benefit from economies of scale (Olson & Weill, 1989).

Academic and business managers studied the history of knowledge and knowledge workers in an effort to improve the management of corporate, government and academic institutions. The research on knowledge workers focused on three areas: the long standing patterns of the use and behavior of knowledge and information in business, government, and personal life activities; the lengthy history of knowledge workers in many different socio-economic settings; and the contemporary, shorter history of knowledge workers and knowledge management.

Principal findings from this body of research were (Cortada, 1998):

- Humans have always recognized the value of collecting and using information.
- People have long used language and writing to document human memory (information and knowledge) for subsequent use and reuse.
- Development of containers for storage and manipulation of information has continued unabated.
• Major institutions across society around the world have collected, preserved, and exploited information for thousands of years.
• Information breeds information.
• Knowledge generally evolves from collections of information.
• Society increasingly values information and knowledge.

These findings are reflected in Hope and Hope’s (1997) description of key information age management issues. Among the issues cited are leveraging knowledge for competitive advantage (knowledge management) and the encouragement and reward for value creating work (productivity).

*Information Environments in Highly Productive Organizations*

Research in the early 1970’s was finally able to establish a link between information and organizational productivity (Koenig, 2000). Highly productive organizations require a steady stream of actionable information to sustain a competitive advantage (Davidow & Malone, 1999). The more competitive the marketplace for an organization, the greater the information need and the greater requirement to invest in information services (Koenig, 1999).

Koenig (1990, 2000) was able to develop a list of characteristics of highly productive pharmaceutical companies:

• Greater openness to outside information: Professional activities were supported. Researchers attended more external meetings at which information was exchanged; they were encouraged to not only keep current in their field, but to seek information beyond their current assignment.
• Less concern with protecting proprietary information: Publication after a patent had been granted and published was encouraged, and the company was perceived as typical rather than well above average in concern for protecting proprietary information.

• Greater information systems development effort: More time was spent developing more sophisticated information systems by library or information center staff.

• Greater end-user use of information systems and more encouragement of browsing and serendipity: The corporate research culture encouraged researchers to spend time in browsing library resources themselves.

• Greater technical and subject sophistication of the information services staff: Staff conducted the more complex technical and subject research while the researchers (customers) did the routine literature searches.

• Relative unobtrusiveness of managerial structure and status indicators in the research & development environment where there was an egalitarian culture.

Researchers from various disciplines investigating creativity and innovation report substantially these same findings. Information access, contact with external information sources, and diversity of information sources are key factors to successful innovation. Utterback’s (1971) review of management literature cites consistent communication as the primary contributing factor to innovation. Wolek and Griffith’s (1974) review of sociology literature reaches the same conclusion. McConnell (1985) credits the flow of formal and informal information up, down, and across the enterprise as the source for improvements in operational productivity. Rosabeth Moss Kanter,
after investigating innovations by middle managers, formulates recommendations for organizational support of creativity that include “a free and somewhat random flow of information” (referred to by Koenig, 2000, p. 91). She asserts that a manager’s needs are information, resources, and support, in that order.

Research has also developed a positive correlation between professional level employees’ productivity and the amount of time spent reading. Koenig (1999) cites research by Mondschein, Ginman, King Research, Inc. and others to validate this theme of greater access to and use of information services by more productive individuals across all findings.

In analyzing the Am Law 2008, the sample population selected for this study, five common characteristics of highly productive, highly profitable private law firms emerged (DiPietro, 2006):

1) **Focused growth**: Firms concentrated on building their strongest practice areas rather than trying to do it all. This attracted not only clients but also high quality staff in the form of new associates and experienced attorneys from other firms.

2) **Discipline in equity partner growth**: Using forced early retirement, closure of less profitable practice areas and increased non-equity partner ranks, firms flattened or reduced firm equity partner growth to grow equity partner profits.

3) **Effective use of leverage**: Higher leverage, or the ratio of all firm lawyers to equity partners, boosted Revenue per Equity Partner.

4) **Focus on productivity (number of hours billed per lawyer)**: Equity partners’ billed about the same number of hours as associates setting the standard for work ethic.
5) Increase in high value-added work: Firms protected their rate structure by concentrating on more profitable practice areas.

Benchmarking

Benchmarking serves as the theoretical framework for the design of this study. The American Productivity and Quality Center define benchmarking as, “the process of improving performance by continuously identifying, understanding, and adapting outstanding practices and processes found inside and outside the organization” (1995, p. 1). Leibfried and McNair (1992) define benchmarking as “an external focus on internal activities, functions, or operations in order to achieve continuous improvement.” Both definitions are consistent with Deming’s (1986) theory of quality management which emphasizes sustained continuous improvement. Benchmarking supports quality management.

Deming structures his management philosophy to remain competitive in providing products and services around 14 principles. Principles address management commitment and leadership, statistical process control, removal of barriers to employee participation and control of their own quality, and continuous improvement of processes. The theoretical essence of the Deming management method concerns the creation of an organizational system that fosters cooperation which leads to the facilitation and implementation of process management practices. These practices, in turn, foster process improvements, error free products and services, and employee fulfillment which Deming considers critical to customer satisfaction and firm survival (Tam, 2000).

This study utilizes only outcomes (performance) and process (best practices) benchmarking, two of the four distinct kinds of benchmarking. “Outcomes
benchmarking compares data across institutions” (Todd-Smith & Markwell, 2002, p. 86).

Process benchmarking combines outcomes benchmarking and process improvement. Workflow maps of selected processes are used to identify ‘best practices’ – ways to do the same process better or faster. Since no prior research exists that identifies which library characteristics are most likely to impact firm profitability, there is no theory linking libraries to a sponsor’s profitability. This research was designed to identify and compare many characteristics across the most profitable private law firms from which emerging theory on libraries’ link to profitability could develop.

Benchmarking has proven itself a useful technique for library managers to introduce quality management, to use to address performance, and to add value to library services. “Benchmarking has been beneficial to the reputation of the information profession” (Gehrke & Britz, 2004, p. 21). Benefits of benchmarking to libraries include:

- Identification of best practices that could produce new operational efficiencies and improve effectiveness.
- Increased credibility with senior management since benchmarking demonstrates a willingness to operate like a business.
- Opportunities to build relationships within sponsoring organization and also with benchmarking partners.
- Enables a library to meet organizational strategic goals.
- Showcases how valuable the library is to the organization.

Dattakumar and Jagadeesh (2003) sought to further the theoretical foundation of benchmarking by reviewing the benchmarking literature. They found that 55% of cited benchmarking publications covering the period 1986 through 2002 focused on
applications, case studies, education, innovations, and extensions. The other 45% concentrated on models, general issues, and benchmarking fundamentals. Moriarty and Smallman’s (2009) content analysis of *Benchmarking: An International Journal* for the period 1994-2008 followed this same trend. Seventy percent of the 407 papers published were empirical studies of benchmarking models or frameworks for organizational improvement. No single exemplary framework has yet emerged (Chen, 2005; Alstete, 2008).

Benchmarking in for-profit organizations can be traced to Frederick Taylor’s ‘scientific management practices’ dating to the early 1900’s. Taylor's work at the pig-iron division of Bethlehem Steel remains a landmark work on benchmarking. In this early study the best worker was chosen to perform a job after it was analyzed for maximum efficiency and control thus establishing the standard or benchmark for all other workers performing that job.

Xerox began using benchmarking in 1979 to halt loss of revenue and market share to their Japanese competitors (Gohlke, 1998). The first reported use of benchmarking in a library was in 1985. A new director at the Metro Toronto Reference Library had come from the corporate world and knew about benchmarking. She instituted a benchmarking study to improve reference services at the library.

Medical librarians became leaders in process benchmarking (Gohlke, 1997) partly due to standards developed by the Medical Library Association (MLA) in 1984, 1994, and 2000 requiring continuous improvement. Another factor was the record number of hospitals closed in the mid-1990s by administrators under pressure to cut costs in the era of ‘managed care.’ The Medical Library Association Benchmarking
Network was formed to address the need for better statistics to identify best practices for hospital libraries as response to these issues. Benchmarking network surveys from 2002 and 2004 listed 12 parameters for measuring the size of a hospital library and 73 measures of library inputs and outputs (Dudden, Corcoran, Kaplan, Magouirk, Rand, & Smith, 2006).

The Association of Research Libraries (ARL) began developing standards and guidelines in 1959 for academic libraries to use in assessing their libraries (Jones, 2007). The Association of Academic Health Sciences Libraries published examples of measures of library inputs and outputs for their members (Dudden, 2007). Outcomes indicators for colleges (Lindauer, 1998; Cullen & Calvert, 1995) and public libraries (Matthews, 2002) have been identified. In the Special Libraries Association’s 1996 report Competencies for Special Librarians in the 21st Century, several competencies incorporated a reference to knowledge and the use of benchmarking (Henczel, 2002).

**Benchmarking and Law Libraries**

“Libraries have traditionally used external comparative benchmarking studies to measure themselves against others in order to justify their existence or prove their value and support their case for maintaining existing levels of staffing or funding” (Henczel, 2002, p. 13). The association of benchmarking with law libraries dates from 1998 when Gohlke recommended it as an approach to use in setting law library performance standards and communicating value up the law firm management chain.

Multiple studies of law libraries have established benchmarks of law library characteristics: Law Library Benchmarks (Primary Research Group, 2006-2007 and 2008-2009), Am Law 200 Annual Law Librarian Survey (Incisive Media, Inc., 2007 and
Examples of established law library benchmarks include number of libraries per firm; number, education, and salaries of library staff; budgets; materials spending; departments managed by library director; and library reporting structure within the firm. Benchmarking characteristics of law libraries corresponds to private law firms’ use of benchmarking as a management tool. In a 2005 survey of management techniques used in the Am Law 200 law firms, 86% of the respondents reported benchmarking was used either successfully or very successfully 83% of the time (Altman Weil, Inc. 2005).

Valuing Libraries

“Librarians in all types of libraries are finding themselves in the position where they must build a solid and effective case on how their library adds significant value to the organization or institution that pays the bills” (Gholke, 1997, p. 22). Libraries are under increasing pressure to be a performing asset to secure needed resources, the same as any division in a for-profit organization.

Pressure to perform is pervasive and has a big impact on library management decisions. It influences decisions about how a library supports its sponsor’s vision, mission, and goals. This pressure dictates a library’s ability to recruit, retain, and develop the right number of qualified library staff. It determines how a library allocates its resources to content purchases and services offered.
Library Evaluation and Valuation Efforts

Numerous studies conducted over decades have shown that libraries have a positive value for their sponsors and are linked to organizational productivity (Koenig, 1990b). The value is associated with a library’s ability to provide information and information related services that support its sponsor’s productivity. Despite this conclusion there is still no consensus on how to precisely measure and define that value. Nor does this study seek to define and identify measures of library value.

Orr (1973) recognized that libraries were becoming increasingly concerned with quantitative assessment of their services in the early 1970’s. Library sponsors began adopting new management tools, generally accounting and economic measures which had first been successfully used in other fields. Managers began to expect all of their divisions, including libraries, to use the same tools to report on operations and to justify budget requests. Today, “the library profession is focused on value more now than at any time in its history” (Holt, 2007, p. 119). The American Library Association’s 2010 strategic plan contains three initiatives that refer to the value and impact of libraries.

Gerould (Hiller & Self, 2004) first recognized the significance of a library’s operational data to library administration in 1906. Contemporary academic library standards are based on Gerould’s work. He began collecting and publishing comparative data from selected academic libraries in 1907. His early attempts to tie standards like minimum number of volumes and staff to budgets and collection development were considered only partially successful because models were based on input (size of collections, staff or budgets) rather than outcomes (impact to user of information obtained) data. Gerould never addressed using the data he collected to
strategically manage a library. The emphasis was on evaluation or measuring performance of departments of a library like reference or cataloging but never the entire operation. The value of a library was not considered. For the purpose of this discussion value is concerned with effectiveness which is doing the right thing, something that positively impacts a user or an organization. Evaluation denotes capability or efficiency -- measuring how well something was done.

During the 1960’s a favorable economy produced generous funding for libraries with little or no justification required by funding entities. Despite the lack of data some attempts were made to focus on measurement and quantification in libraries. The resulting body of work represented the beginning of the literature on results of quantitative techniques applied to measurement in libraries by different groups in different places (Morse, 1968; Lancaster, 1977; Baker & Lancaster, 1993).

Armstrong (1968) wrote about measurement and evaluation of public libraries. Orr (1973) proposed quantitative measures for measuring the ‘goodness’ of library services. “A Bibliography on Operations Research in Libraries” (Buckland and Kraft, 1976) listed over 700 items. White (1979) analyzed cost-effectiveness and cost-benefit in special libraries. Special libraries while most often business, medical or law libraries, are any library not otherwise classified as academic, public or school (K-12).

‘Library goodness’ is significant to this review because it led to an understanding of the need to account for library intangibles when measuring library value (Orr, 1973; Buckland, 1977, 1984, and 1988). During the transition from a manufacturing to an information based economy organizations “began to be assessed as being more valuable than just their tangible assets and resource assessments could account for
with traditional tangible assessments” (Bukh, Christensen, & Mouritsen, 2005, p.3). Orr’s schema of ‘library goodness’ was the first to include measures of both quality (evaluation of capability) and value (beneficial effect) in a library setting. Orr (1973, p. 318) defined the criteria for assessing service quality as “capability for meeting the user needs it is intended to serve,” and for value “in terms of the beneficial effects accruing from its use as viewed by those who sustain the costs.” Buckland also argued the difference a library made to its customers and not ‘library goodness’ was the true measure of a library’s value.

Lancaster (1977) published the first systematic review of studies measuring and assessing library performance and evaluation methods. He discussed the studies, mostly of academic libraries, in the context of effectiveness – how well a service satisfied the demands of its users; cost-effectiveness – how cost effectively a system met the needs of its users; cost-benefit – whether the value of the service was more or less than the cost of providing it which he believed could be used to evaluate any service. He distinguished between macroevaluation measures – how well a system operates – and microevaluation – how a system operates and why it does so at a particular level. Lancaster concluded that microevaluation results were necessary to improve performance, an important point for library administrators attempting to prove their library’s value.

Literature from the 1980’s showed a concentration on organizational effectiveness in libraries (Aversa, 1981), management statistics in libraries (Association of Research Libraries, 1987), and output measures for public libraries (Van House, 1987). The most significant library valuation work of this period comes from Griffiths
and King (1982). They were asked by the U. S. Department of Energy to investigate the feasibility of measuring the value of their energy data base. Griffiths and King were able to develop a framework of measures, methods, and models which emphasized cost-benefit ratios to describe the information environment of a library and its users. This project launched decades of work on valuing libraries for Griffiths and King who are still considered the industry experts on library and information services valuation.

An economic downturn across the United States in the 1990’s meant funding for libraries was again curtailed. Identifying costs and benefits of library services became even more critical in establishing the positive monetary value of library services. Attempts to derive a value for information services continued with an emphasis on the relationship between information services and productivity.

It was the intangible nature of assets libraries created that made measuring libraries’ contributions to their sponsoring organization difficult (Portugal, 2000). With the introduction in the 1990’s of new scientific management tools that accounted for intangible assets, libraries finally began to craft meaningful value statements for their parent organizations.

During this period Stewart (1997) coined the term ‘intellectual capital’ and defined it as “the sum of everything everybody in a company knows that gives it a competitive edge.” Barron (1995) justified the need to assess intellectual capital as a way to strategically respond to resource challenges and effectiveness needs. Intellectual capital valuation is a valuation method that uses measures from four categories – user focus, process focus, research and development focus, and human focus to measure overall strength of library activities. It was one of the four approaches to valuing
intangible information resources identified by Portugal (2000) in a study of 125 corporate and other organizations.

Martin (2000), Currall and McKinney (2006), and Phillips (2006) also addressed assessment and value of intangibles. Koenig (1996, 1997) and Dakers (1998) showed how intellectual capital could be used not only to account for a library’s intangible assets, efforts, and resources but also to increase the value of the library and its services.

Seventeen different public library valuation studies conducted between 1998 and 2007 were summarized in _Worth their Weight: an Assessment of the Evolving Field of Library Valuation_ (Imholz & Arns, 2007). The report showed the many attempts by various researchers to estimate dollar values of services that libraries returned to their users for public money invested – return on investment. To date there is no consensus for an exemplary model of intangibles assessment for libraries.

Calculating the Economic Value of Information as a Productivity Factor

In the information and library science field, the earliest productivity research focused on the value of information and information services. First this research focused on the concept of value and ways to measure it. Secondly the research described the calculation of the value of information products and service using those measurements (Griffiths, 1982). Other studies approached value by exploring the impact of libraries and librarians on creativity and innovation, scientifically proven contributing factors to productivity.

Graham and Weil’s 1975 Exxon research center study is considered the seminal work on valuing information services (Koenig, 2000). This study was the first to
evaluate the benefit of the service provided and derive a value of information. Sixty-two percent of Exxon researchers reported that information events recorded over twenty randomly selected days were of benefit and two percent of the participants quantified that value. Graham and Weil were able to extrapolate an 11:1 ratio of benefits to cost of providing the information services at the Exxon Research Center. This study was followed by a similar but larger study at NASA in the late 1970s but the findings were never published in the journal literature. A 1.98:1 ratio of benefits to cost of providing the information services for NASA was subsequently developed. The NASA (1.98:1), and DOE (2.2:1) studies’ ratio of benefits to cost of providing information services were remarkably similar. Koenig (1999), after reviewing a number of cost-benefit studies with a range of benefits to cost, posited a conservative value ratio as 2:1.

Valuation methodologies which focused on the value of information services were most fully developed and widely applied by King Research. In 2005 dollars, the ratio of benefits to cost return on investment calculated by King and Griffith would average 3:1. King and Griffiths also determined that an organization without a library spent on average three times more per professional than an organization with a library: without library = $6,588; with library = $1,408) and that the average special library (typically law, medical, government or corporate libraries) spent between $525 and $1,325 per year per professional employee in 2005 dollars (Matthews, 2007). Griffiths and King (1993, p. 1) summarized the results from “27 independent studies performed with 16 companies, seven government agencies and including four national surveys of professionals (collectively more than 10,000 statistical survey responses from scientists, engineers, lawyer, and management, administration, marketing and other
professionals)” in their book, *Special Libraries: Increasing the Information Edge*. King Research studies showed that libraries provided better services, faster and at a lower cost than other alternatives proving that a library helped to increase quality, timeliness and productivity of workers and ultimately the organization itself (Mathews, 2007).

Value assessment from the user perspective was advanced by King and Griffiths during their study on the value of the energy database (as referred to in Griffiths, 1982). Three views of user perspective valuation were defined: 1) input perspective or what users would pay for information and its products or services; 2) process perspective or how the use of information affects works; and 3) output perspective or how work affects the environment as a whole. A key concept to their approach was the assumption that the cost of a professional users’ time was much greater than the cost of providing library services.

Matarazzo, Prusak, and Gauthier (1999a) and Matarazzo and Prusak (1999b) conducted studies on the value senior executives placed on information centers and information professionals. A trend analysis technique was used to show the value or impact of the library increases when it is closely aligned with the more strategic pieces of the sponsoring organization. A deep understanding of the sponsor’s business, industry, and market in which it operated was identified as essential to delivering more complex services such as data analysis, a service that would increase the library’s value to its parent. Other activities supporting higher value included increased end-user access to information which then required increased training on selection and use of information resources; reduction in size or zero growth of library or information center staff, space requirements, and budgets; adoption by information professionals of a more
proactive stance in delivering information. No determination was made as to which of these factors contributed most to corporate productivity (Matarazzo, Prusak & Gauthier, 1999a; Matarazzo & Prusak, 1999b).

Marshall (1992) conducted two studies in which she examined the impact of a library on organizational decision-making. The “Rochester Study” focused on the value and impact of hospital libraries in the Rochester, New York area. It was the first study of hospital libraries that measured value and impact rather than basic inputs, outputs and outcomes. In a second study, *The Impact of Special Libraries on Corporate Decision-Making* (1993), Marshall was able to quantify the monetary value of time saved by the library service provided which she was unable to do in the Rochester study. Subsequent studies have focused on topics ranging from benchmarking in health libraries (Dudden, 2007) and evidence-based librarianship (Eldredge, 2006; Helmer, Savoie, Green & Kazanjian, 2001) to impact measures and value for libraries (Poll & Payne, 2006; Marshall, 2000).

There is evidence of attempts by libraries to demonstrate their financial impact to their organizations by contributing directly to firm revenues. Hershey and Cushing (2006) report a medical library at a non-profit turned itself into a cost center by offering fee-based library services to customers outside its organization. Law libraries routinely generate revenue since almost all bill clients for some types of work. Number of billable hours and bill rate are two measures consistently tracked and communicated to law firm management to show the value of law libraries to their firms (Matthews, 2007). Boosting the bottom line of a library’s sponsor outlined in these studies is not the same as the subject of this research. This study seeks not to determine the economic value
of various library characteristics but to learn which characteristics relate to law firm net profitability so they can be adopted by law library administrators wishing to increase the value of their library’s contribution to firm bottom line.

Rankings have been successfully used to identify differences between characteristics of libraries serving higher ranked organizations and lower ranked organizations though no link to value was established. Pagell and Lusk (2002) analyzed the differences in resources allocated to libraries supporting business schools on the basis of two business school rankings: schools focusing on research and those emphasizing the masters of business administration programs. In an attempt to understand spend on libraries by colleges, Jones (2007, p. 350) examined benchmarks for library characteristics using the U. S. News and World Report rankings of “a group of top-ranked liberal arts colleges where the ranking was based on college attributes as a whole with no direct library measurement component.” These studies serve as the inspiration for the author’s dissertation research presented in this report.

Law Firms and Law Libraries

The Legal Environment

The practice of law in the United States began in colonial times. Work was done principally by lawyers in solo or small partnership settings using the firm lawyer(s) personal collection of legal information resources. To become a lawyer one literally read the law. Private law firms date to the nineteenth century when lawyers first opened offices separate from their homes. Partnerships began to substantially grow beginning in the 1970’s (Berring, 2007). Today private law firms may have many locations each with a unique regional, industry or practice area focus (Chandler, 1993).
Competition among private law firms headquartered in the United States is intense. According to the American Bar Foundation (2004) latest statistics, there are 47,563 law firms and 1.18 million licensed lawyers. To remain viable law firms must compete against peers to give clients “better, faster and cheaper legal services” (Alber, 2007, p.67). New technologies, the Internet and effective marketing have enabled small ‘boutique’ firms that specialize in very limited practice areas and multi-disciplinary practices with location based specialties to effectively compete for clients against ‘mega-firms.’ Mega firms have 1,000+ lawyers, offices on several continents, an hourly bill rate $\geq$ $750 per hour, and a high ratio of support staff to lawyer (Trotter, 1997).

The Legal Information Environment

Law firm libraries evolved from the personal collections of law books owned by justices and lawyers in colonial times. The contemporary private law firm library dates from 1899 when the New York law firm of Cravath hired the first law librarian, a clerk trained at the Columbia University Library.

There are three types of private law libraries: libraries serving corporations; libraries serving bar associations and libraries serving private law firms. For this study, law libraries were defined as those serving private law firms only. Private law librarians represent the second largest membership group of American Association of Law Libraries (AALL) membership. According to 2009-2010 AALL Directory and Handbook membership statistics, 36.8% ($n = 1695$) of its 4,606 members work in private law firm libraries.

Libraries are an integral part of the practice of law in firms. Law firms often have a network of libraries with targeted collections based on practice areas and location. An
Am Law 200 firm typically has libraries at 44% of its locations according to the 2008 Am Law 200 law library survey (Cohen, 2008). This survey has been conducted annually since 2002 by Incisive Media fka ALM Research, the same research firm that compiles the annual Am Law 200 rankings.

Expense incurred in the creation, acquisition and management of legal information assets represent strategic investments. These investments require a factual basis for their usefulness to the law firm’s practice to obtain senior management endorsement and facilitate adoption of information best practices across the firm.

Research on Law Libraries

All types of law libraries have been surveyed multiple times by research and consulting firms and professional associations to establish industry-wide benchmarks for various law library characteristics. Some studies have been repeated at regular intervals over a period of years. Two distinguishing features of this body of research are: results have been generally segmented on the basis of law library type (government, private, and academic), budget, or number of lawyers making it difficult to link survey results to anything other than these three factors; minimal statistical analysis (mean, medium, maximum, minimum) were included in the survey reports. Despite these limitations, law library administrators use these benchmarks to support strategic decision-making in the management of their libraries.

Studies on law libraries have included many quantitative measures and some qualitative measures. Data which could otherwise be used to assess library characteristics linked to firm financial productivity has not been segmented by individual firm libraries. Some studies have contained descriptive narrative reports on individual
firm libraries but the data was inconsistent across libraries and studies. Overall these research findings can be categorized as: Law Library Administrators and Staff, Law Library Management, and Law Library Knowledge Management Activities.

*Law Library Administrator and Staff Research*

Several measures of law library staff are consistently tracked in the body of research on law libraries. Average size of total full-time permanent library staff for a private law firm library ranges from 2.5 as reported in the Canadian Association of Law Libraries Study of Private and Corporate Law Libraries, 2006, 4.25 according to the Law Library Benchmarks, 2008-09 and 6.5 per the AALL Biennial Salary & Organizational Characteristics, 2009. The ratio of professionals (staff with a juris doctor and/or masters in library science) to all other staff in these three studies averages 2.8:1.

Six out of 10 private law firm library professionals have more than 10 years of experience at their current position per the AALL Biennial Salary & Organizational Characteristics, 2009). Between 60% -- AALL Biennial Salary & Organizational Characteristics, 2009-- and 70% --Law Library Benchmarks, 2008-09-- of library professionals employed in law libraries have bachelors and masters of library science degrees. Educational and professional development assistance is provided by 51% of firms while 96% of law firms pay for law library staff’s professional association memberships according to the AALL Biennial Salary & Organizational Characteristics (2009).

Law library administrators most often report to the library committee partner or chief operating officer/director of administration/executive director according to the Canadian Association of Law Libraries Study of Private and Corporate Law Libraries
Only 29% of law library administrators manage additional departments. Records management (11%) and knowledge management (8%) departments are most frequently a part of with the law library administrator’s responsibility as reported in the AALL Biennial Salary & Organizational Characteristics, 2009.

Standard hourly billing rates for law library staff services range from $120 to more than $200. According to both the AALL Biennial Salary & Organizational Characteristics, 2009 and the Canadian Association of Law Libraries Study of Private and Corporate Law Libraries, 2006, the more lawyers in a firm, the higher the billing rate. Annual billable hours worked by library staff range from 179 to 1,275. Number of billable hours worked increases as the number of lawyers in a firm increases per the AALL Biennial Salary & Organizational Characteristics, 2009.

Though this survey did not include salary as a possible independent variable, law librarians are traditionally among the highest paid librarians. According to the 2009 AALL Biennial Salary Survey & Organizational Characteristics, salary for most technical services staff in a private law library averages $55,530. Competitive intelligence analyst/librarians, government documents librarians, and solo/reference/research librarians average $72,927. The Internet librarian averages $72,419. Managers are very well paid. A supervisory librarian averages $88,390 per year and an associate/deputy/assistant director/chief of branch earns on average $103,126 per year. Director or chief librarians earn an average of $107,403 per year.

**Law Library Management Research**

Average annual budgets for private law libraries range from $1,438,256 (AALL Biennial Salary & Organizational Characteristics, 2009) to $1,540,441 (Law Library
Benchmarks, 2008-09). Average annual information budget per lawyer varies according to number of attorneys in a firm and ranged from $9,743 (<41 lawyers) to $11,848 (>450 lawyers) according to the AALL Biennial Salary & Organizational Characteristics, 2009. More firms want to downsize their libraries but maintain their law library budgets (56%) than aggressively support their libraries (37%). Smaller firms with fewer lawyers tend to more aggressively support the law library per the Law Library Benchmarks, 2008-09.

Private law firms average three separate law library locations but the more lawyers in a firm, the more law library locations as reported in Law Library Benchmarks, 2008-09. Firms with multiple libraries either have a union catalog with holdings from every office (24%) or a separate catalog for each library location (21%) per the Canadian Association of Law Libraries Study of Private and Corporate Law Libraries (2006).

Law library staff average 3.4 hours a week working with blogs, wikis, social networking sites, or listserv. Twenty-two percent of private law firms and/or their law libraries report having a presence on a social networking site. Twenty-six percent use RSS feeds but just 11% have wikis (Law Library Benchmarks, 2008-09). Multiple studies report between 40% and 60% of law libraries create databases such as content management systems through which case materials are scanned and made available across the firm (Canadian Association of Law Libraries Study of Private and Corporate Law Libraries, 2006; Law Library Benchmarks, 2008-09). Loose-lease filing or pocket part replacement is most frequently cited (30%) as the service outsourced though law libraries seldom outsource anything (Law Library Benchmarks, 2008-09).
A majority of firms have intranets (77%) for which the library prepares and updates library web pages (41%), prepares library webpage content (27%) and prepares firm intranet content (21%) per the Canadian Association of Law Libraries Study of Private and Corporate Law Libraries (2006). A majority of law libraries (86%) serve on the firm’s Internet committee or play some other role in creating or updating their firm’s Internet website (Canadian Association of Law Libraries Study of Private and Corporate Law Libraries, 2006).

Law Library Knowledge Management Activities Research

Only 61% of participants in a 2006 study on law firm knowledge management reported they had any kind of knowledge management strategy (Global Law Firm Knowledge Management Survey, 2006). Only 44% of private law firms report having a knowledge management system in place according to the Law Library Benchmarks, 2008-09 study. The three most important firm knowledge management objectives are: improving the quality of client service (71%); leveraging expertise (49%); and gaining a competitive advantage (48%). Law librarians generally describe their role in the firm’s knowledge management initiatives as contributor (36%).

Three out of four law firms include the following in knowledge management activities more than 50% of the time per the Global Law Firm Knowledge Management Survey, 2006: best practice and model documents (91%); precedents/forms (90%); firm and practice area information (79%); case law, commentary, and interpretation (75%); internal training papers (75%); third-party information on regulators, judges, counsel, experts, etc (70%); information on existing clients (67%), staff skills and expertise
(67%); business and industry information (63%); external seminars and presentations (63%); clause library (60%); and legislation and commentary (60%).

Libraries generally perform the tasks of an information officer so few firms have such a role on their knowledge management team. Services provided by libraries in this role include: conduct legal research (59%); develop intranet content (50%); develop content generally (47%); prepare intranet content (44%); and identify, monitor, and disseminate current awareness materials (44%).

Knowledge Management and the Legal Environment

“Law is an information-intensive profession, in which there has traditionally been great reliance on external information. Currently, however, greater focus is placed on internally generated information and expertise; in harnessing such knowledge, the legal sector exemplifies means by which information may create business value for organizations” (Broady-Preston & Williams, 2004, p. 9).

Knowledge management (KM) has numerous definitions: “the set of processes that create and share knowledge across an organization to optimize the use of judgment in the attainment of mission and goals” (Townley, 2001, p. 45); “…a conscious strategy of getting the right knowledge to the right people at the right time and helping people share and put information into action in ways that strive to improve organizations performance” (O’Dell & Grayson, 1998); “an emerging set of strategies and approaches to create, safeguard, and use knowledge assets (including people and information), which allows knowledge to flow to the right people at the right time so they can apply these assets to create more value for the enterprise” (Hasanali, 2002, p.1). They all
essentially describe the consolidation and centralized management of an organization’s information environment to ultimately support improved performance and productivity.

Cross and Baird (2001) confirm that “explicit and tacit knowledge is critical to an organization’s ability to solve problems and create new knowledge” (p.70). They identify five types of organizational knowledge, all of which are present in private law firms:

1. Tacit and explicit knowledge gained through experience and held in employees’ minds (attorneys).
2. Tacit and explicit knowledge shared in work groups (paralegals and administrative groups).
3. Knowledge repositories (databases) of explicit knowledge (document management systems).
4. Knowledge incorporated into work processes and support systems (records management).
5. Knowledge embedded in products and services (information technology tailored to law firm organizations).

Citation analysis research by Ponzi (2004) confirms that knowledge management is not another management fad. A fad initially appears in the literature. The number of articles grows rapidly for about five years and then begins to fall rapidly. Within ten years the fad is seldom if ever mentioned again. About 25 knowledge management articles were published annually from 1991 to 1996. The number of articles began to rise peaking at 584 articles in 1999. The next year publication occurrence dropped some 20% but rebounded to prior levels in 2001 and remains steady. Knowledge
management continues to be the topic of numerous articles outpacing business literature as a whole (Koenig & Srikantaiah, 2004).

Prior to World War II, knowledge work, its theories and concepts, had been dispersed among the fields of education, academics, and philosophy. When management science became interested in knowledge management, the field emerged to bring together the use of knowledge-based activities to improve organizational operations.

Law firms have been early but slow adopters of knowledge management practices despite pressure to demonstrate efficient management to clients. According to the 2008 Am Law 200 law librarian’s annual survey, 75% of the respondents reported their libraries participated in firm knowledge management activities, a drop of 9% from the 2007 survey results. In 2009, participation in knowledge management activities is on the rise again up 4% to 79%. The study fails to identify in which knowledge management activities law librarians are engaged.

Rusanow (2006) conducted a survey of 71 international law firms on the state of knowledge management in their firms. She found that while firms were managing both explicit and tacit knowledge, the focus remained on the firm’s knowledge about the practice of law rather than operational aspects of running a law firm. A firm’s financial business and human resources information was generally not considered part of its knowledge management system. Although 84% of survey respondents said the firm’s culture supported knowledge management, there was an inconsistent user understanding of the scope of knowledge management and how knowledge
management initiatives generate value for the firm. Barriers to knowledge management practices were identified as:

- The time based billable hours fee model discourages sharing tacit knowledge among attorneys.
- A lack of “Return on Investment” (ROI) as perceived by respondents.
- Attorneys not being given fee relief or billable hour credit for knowledge management activities though contributions are included in evaluating performance.
- Little accountability for success because knowledge management activities, while part of planning, are excluded from reports to senior management.

Survey responses further indicated that law firms do not always make the best use of state-of-the art knowledge management systems. For example, taxonomies developed by 66% of survey participants to facilitate access to knowledge systems varied greatly from firm to firm.

Logically, worker productivity should improve with increased access to useful information but productivity gains from information being available at the desktop have been increasingly offset by two factors: the tremendous volume of documents that could be accessed and the corresponding rise in time spent by employees on navigating those documents.

Individuals may not always find the correct information or all of the information they seek. After spending 20-25% of their time looking, other work-related tasks become more important and information seekers perceive further effort will yield
insufficient results to warrant more time expenditure (Koenig, 2000). This percentage remains constant across companies and industries.

Today’s knowledge workers spend an average of 10.7 hours per week seeking and analyzing information. For private firm lawyers the numbers jump to 17.3 hours per week seeking and analyzing information of which 8.9 hours are spent gathering information (Curle, 2009).

It is conceivable a firm could generate significant savings if it employed information professionals to reduce a lawyer’s “searching” by as little as three hours a week. Using a law firm with 300 attorneys and an average billable rate of $300 per hour as an example, over a 50 week period, loss of income from billable hours spent searching for information = $13.5 million a year (3 hr X 50 wks = 1,500 x $300 hr x 300 attorneys).

Other changing information consumer behaviors relevant to this study are (Healy, 2006):

- The Internet or intranet is first choice for research by 76% of information users.
- Users are turning to online media (blogs, personal websites) for peer-to-peer information sharing though they tend to first seek information from colleagues or peers outside their organization much less than in prior years.
- Searches fail 31% of the time which increases information seeking time.
- Content for handheld devices is critical as the adoption rate of mobile technologies rapidly increases.

Friedmann (2006) provides these examples of firm wide knowledge management activities: best practices, experience locators, forms or precedents and actual work
products. Prior research does establish that law librarians are involved in firm knowledge management activities. It does not establish the knowledge management activities in which they are most likely engaged.

Productivity Improvements from Knowledge Management

Some researchers argue that law firms are representative of knowledge intensive organizations most likely to improve performance using of knowledge management techniques because “professional expertise and knowledge are both inputs and outputs in this sector” (Hunter et al., 2002, p. 8). Though scholars have created theoretical models to link knowledge management and productivity (Edvinsson, 1997; Marr et al., 2004), there is little empirical evidence such a link exists. Using case studies of several London based private law firms, Broady-Preston and Williams (2004) established that law firms did perceive the use of information was associated with increased performance but no hard evidence was developed. A second case study of one of the three largest private law firms in the world “provided evidence that fee income can be partly predicted by a set of KM related predictors” (Forstenlechner, Lettice & Bourne, 2009, p. 62). Principle knowledge management driven fee income predictors were identified as counsel and legal opinions, personal know-how exchange, ease of use of know-how systems, news, and current affairs.

Investment in knowledge management tools by law firms to improve productivity emerged as a response to two phenomena: the need to retain and manage a law firm’s intellectual capital and the ever-increasing amount of information being generated and needed to conduct the practice of law. Law firms who have technology based business models are valued by corporate clients (Caddell, 2007). Clients expect firms to use
knowledge management to improve client service delivery. They associate a firm’s degree of technology expertise and its application to knowledge management initiatives with its ability to help clients control legal costs. Clients also have the perception that a tech savvy law firm is more responsive and has a greater capability to deliver innovations to the client. In addition to improved quality of client service, adopting knowledge management techniques delivers the ability to leverage expertise across a firm, attainment of competitive advantage and improved speed of client service delivery (Rusanow, 2007).

A study of the top ten global law firms (Forstenlechner, Lettice, Bourne & Webb, 2007) identified benefits associated with the value perception of knowledge management among lawyers and staff as:

- **Efficiency** – a firm’s efficiency is directly correlated with a firm’s knowledge management activities (Huang et al., 2006).
- **Quality** – standardization, the exchange of good practices and consistent, best-in-industry service to clients builds loyalty and supports future revenue (Rusanow, 2006).
- **Long term benefits** – knowledge management can be a competitive advantage as more clients demand increasing efficiency from firms; it is a recruitment tool for new associates; it negates the impact of low retention among lawyers; liability insurers are asking for documentation of knowledge management systems.
- **Influence on firm culture** – knowledge management fosters collaboration, improves consistency, and facilitates global law firms as being one firm.
- **Current awareness** – practice specific news saves significant amounts of time.
• Training – increasing knowledge available to junior associates frees partners to do more complex work at higher rates and enables the associates to do higher level work at higher rates too.

The American Productivity and Quality Center (1997), in its benchmarking study, “Using Information Technology to Support Knowledge Management,” found that study participants cited practice and process improvement (specifically cycle-time reduction), firm growth, and increased customer and employee satisfaction as areas of greatest improvement outcomes.

Summary

In Chapter 2, a review of the literature from multiple disciplines details the relatedness of productivity and benchmarking, library valuation, and knowledge management to private law firms and their law libraries. Benchmarking, the theoretical framework of the research, is shown to be a useful technique for library managers to add value to library services. Suitability of the legal profession for the study is discussed. A summary review of prior private firm law libraries research explains what is known. This sets expectations about what might be learned from a benchmarking survey of law libraries to determine the relationship between law libraries and private law firm profitability.

The theoretical framework for the study, suitability of the subject industry for the study, and summary review of prior law library research support the research design and methodology which will be outlined in Chapter 3.
CHAPTER 3

RESEARCH METHODOLOGY

Introduction

In this chapter the methodology used in designing and executing the study is explained. Survey population selection, development of the survey instrument and data collection is described. Data preparation and statistical analysis are discussed.

Research Design

This study combined qualitative (descriptive) and quantitative (relational) approaches to answer the research questions (RQ) and test hypotheses about characteristics of libraries serving highly profitable private law firms and the link between law firm profitability and the law library. Qualitative research is best used at the beginning of a research project if little is known about the subject or to gather data to begin theory building. A qualitative study often precedes a quantitative study since it can generate the basis for forming hypothesis which can then be statistically analyzed using standard quantitative research methods (Shuttleworth, 2008).

Two of the three reasons to conduct a descriptive study are also reasons to conduct this study: learning more about law libraries serving highly profitable law firms and identification of areas for further research. In a descriptive study, data is typically gathered from surveys and other qualitative methods to inform conclusions and recommendations. A benchmarking study was conducted to determine differences in Am Law library characteristics and industry standards (benchmarks) to validate a basic concept of the study; that libraries serving highly profitable law firms are different from other private law firm libraries. The association of benchmarking with law libraries dates
from 1998 when Gohlke recommended it as an approach to use in setting law library performance standards and communicating value up the law firm management chain.

The relational approach is equally suited for this study. This type of quantitative study looks at the relationship of two or more variables. “A relational study assumes that you can first describe (by measuring or observing) each of the variables you are trying to relate” (Trochim, 2006, p. 1). It is appropriate for this study since a series of law library characteristics are analyzed to determine if they were a factor in Revenue per Equity Partner rank (profitability). In quantitative research a hypothesis is generated then tested by statistical means. A random study sample is critical and the research should be scalable and repeatable.

Since there is no theory about the relationship of library characteristics and a sponsoring organization’s profitability, both approaches to the research design were necessary to establish data from which emerging theory might be developed.

Advantages and Disadvantages of Qualitative and Quantitative Research

Advantages of qualitative research design are; ease of execution, it is less dependent on sample size than a quantitative study, and because the scope is generally broad, some useful data is always generated. Disadvantages are that qualitative data is subjective and cannot be mathematically analyzed in the same ways as quantitative data. Qualitative data often is unique to a situation so cannot be generalized and replicated (Shuttleworth, 2008).

Advantages of quantitative research design are that it is a well-known standardized structure successfully used for centuries, and statistical analysis means reliable, reproducible, and unbiased results (Shuttleworth, 2008). A disadvantage is
that quantitative research requires statistical analysis while most researchers are not statisticians. The absolute results do not lend themselves to the gray area occasionally needed in some fields such as the social sciences and education.

Theoretical Framework for the Study

Outcomes benchmarking, “the process of improving performance by continuously identifying, understanding, and adapting outstanding practices and processes found inside and outside the organization” (American Productivity Center, 1995, p. 1) was selected as the theoretical framework for the design of this research. A benchmarking survey addressed the need to make numerous comparisons of law library characteristics across multiple private law firms with various profitability levels to answer research questions and test study hypotheses. A second reason to use the benchmarking survey was that “libraries have traditionally used external comparative benchmarking studies to measure themselves against others in order to justify their existence or prove their value and support their case for maintaining existing levels of staffing or funding” (Henczel, 2002, p. 13). A third reason was that benchmarking demonstrates to senior management a willingness by a library administrator to conform to law firm business practices. In a survey of management techniques used by the Am Law 200 private law firms, 86% of firms reported using benchmarking either successfully or very successfully 83% of the time (Altman Weil, Inc. 2005). Lastly, multiple research studies, some repeated at regular intervals over a period of years, have used benchmarking surveys to establish industry-wide standards for a variety of law library characteristics of all types of law libraries.
Law Firm Profitability Rank and Measure

For this study, rank, with number one being the highest, was used to determine degree of profitability of a private law firm. Three financial performance metrics were originally considered for use as the measure of law firm profitability. The measure or measures selected were to serve as the dependent variable(s) for the purposes of statistical analysis. This ranked order was necessary to address research questions about the relationship between law library characteristics and their law firm profitability according to a firm’s level of profitability.

Gross revenue (GR) was considered for use as a measure since the Am Law 200 ranking is based on gross revenue. Gross revenue used in the Am Law 200 ranking is fee income from legal work only and does not include disbursements or income from non-legal ancillary businesses. Gross revenue was inadequate because bar regulations limit law firm growth and revenue to legal services, personal and professional relationships drive the purchase of legal services, and law firm revenues can grow because of consolidations or mergers and acquisitions (Gibson, 2002).

Revenue per Lawyer (RPL), calculated by dividing a law firm’s gross revenues by the number of lawyers in the firm, does not factor in leverage, the ratio of non-equity lawyers (associates) to equity partners, which varies greatly from firm to firm (Gibson, 2002). A lawyer is defined as an individual licensed to practice law.

Gibson’s analysis of Revenue per Equity Partner in a 2002 study of the 1995-2000 Am Law 100 statistically proved it to be the best predictor of profits. As a metric of law firm performance it collapses into a single variable all revenue related performance information about a law firm. Revenue per Equity Partner is calculated by dividing a law
firm’s gross revenues by the number of equity partners. An Equity Partner is a lawyer who files a Schedule K-1 IRS tax form and receives no compensation on a fixed-income basis as opposed to a non-equity partner, a lawyer that receives more than half their compensation on a fixed basis (Clancy & O’Connor, 2008).

Since a Pearson’s correlation test showed a significant correlation among all three factors, the Revenue per Equity Partner measure was selected to serve as the dependent variable because it is the best predictor of law firm profitability (Gibson, 2002).

Sample Population - Study Participants

Theoretical population for this study was the approximately 47,500 private law firms headquartered in the United States. Nearly all private law firms are organized as partnerships which are not required to publicly disclose financial data. The research design required a financially ranked listing of the most profitable private law firms in order to establish relative measures of profitability among firms selected for the survey population. The Am Law 200, a ranked listing of the 200 highest grossing private law firms headquartered in the United States published annually since 1984, was chosen as the accessible population. The difference in gross revenue between the firm ranked number one on the 2008 Am Law 200 ($2.17 billion) and the firm ranked number 200 ($101 million) is a significant $2.06 billion. All financial data from which a dependent variable could be derived for the study were provided as part of the Am Law 200 rankings.

The Am Law 200 is published annually in the May and June issues of the journal American Lawyer. Staff at the following publications investigate and report data on the
Am Law 200: American Lawyer, Connecticut Law Tribune, Daily Business Review (Miami), Fulton County Daily Report (Atlanta), Legal Intelligencer (Philadelphia), National Law Journal/Legal Times, New Jersey Law Journal, New York Law Journal, Recorder (San Francisco), and Texas Lawyer. Most law firms provided their financials voluntarily but estimates were made for those who chose not to cooperate. Numbers are restated if an error in reporting in a previous year is discovered (Clancy & O’Connor, 2008). Gross revenue and net operating income are rounded to the nearest $500,000. Profits per partner, revenue per lawyer, and compensation—all partners are rounded to the nearest $5,000. Despite law firms ‘self-reporting’ the data used to determine Am Law 200 rank, the list is considered credible and the data is universally used by law firms as industry benchmarks.

The accessible population, the Am Law 200, represented .42% of the theoretical population of 47,500 private law firms in the United States. Of the original 200 firms appearing on the 2008 Am Law 200, 10 firms had dissolved or merged with other firms since the 2008 Am Law list was compiled. Eleven firms were excluded from the survey because no contact information could be found for any library staff person. Total survey sample population was 179 private law firms.

Institutional Review Board

An application outlining the proposed research was submitted to the Institutional Review Board for Protection of Human Subjects for approval which was granted (Appendix A). Because the survey was an online survey, individual written and signed informed consent notice requirements did not apply. An informed consent notice was
included with the introduction to the study and preceded the online survey. The participant, by completing the survey, agreed to be a part of the study.

**Survey Questionnaire Development**

To operationalize this research, a web-based survey questionnaire was designed to collect data that described law library characteristics, the independent variables. Data also had to be of a type that lent itself to determining relationships between the independent and dependent variables in order to answer the research questions and to test study hypothesis.

Most of the law library characteristics selected for study are the subject of prior law library studies which have been repeated multiple times over a period of years. Survey questions were developed by analyzing research findings from studies that described benchmarks for various library characteristics. Criteria for selection of law library characteristics for this study were: usefulness in answering study research questions; relevance to the hypotheses, i.e., could this characteristic impact profitability and, if so, was financial rank a factor; frequency with which a characteristic appeared in prior studies of law libraries. High frequency was assumed to be an indicator of increased importance to law librarians. Benchmarks existed for all selected variables with these exceptions: some library services, some content of library collections, types of data collected to report value, library valuation methods used to communicate value to upper management.

Law library research studies from which the survey instrument was derived were:

- Law Library Benchmarks –2008/09 - Primary Research Group

• 2005 Private Law Library/Corporate law Library SIG Operational Survey - Canadian Law Library Association

• Global Law Firm Knowledge Management Survey, 2006 - Curve Consulting

The survey instrument was tested for validity in a pilot study of 10 law firms listed on the 2009 Texas 100. The Texas 100 was first published in 1987 in the journal, Texas Lawyer. It is an annual ranking of the 100 largest law firms based on number of attorneys working in Texas as of January 1 of the year the list is published. The Texas 100 is not the only state ranked listing but was selected as the source for the pilot study because Texas it is the home state of the author.

The highest ranked Texas 100 private law firms not already listed on the 2008 Am Law 200 where chosen to participate in the pilot study. A survey recipient was chosen in this order: Administrator of a firm’s entire library system, administrator of a firm’s library located at the firm headquarters as listed in the online edition of the Martindale-Hubbell Law Directory (http://www.martindale.com), the only firm librarian, or library staffer. The Martindale-Hubbell Directory, published since 1868, is a widely recognized authoritative source of information on US law firms. Membership directories from the American Association of Law Libraries, and the Legal Division of the Special Libraries Association were used as the source of contact data so survey recipients had to be a member of at least one of these professional associations. The American Association of Law Libraries, founded in 1906, is the principal professional association of law librarians in the United States. The Special Libraries Association, founded in
1909, is the principal professional association of special librarians. The Association’s Legal Division was established in 1993 to serve as a forum for the exchange of information, ideas, and knowledge among law and regulatory affairs librarians. Special libraries are those libraries not otherwise classified as school (K-12), academic (college and university) or public.

Each pilot study survey recipient was sent an email (Appendix B) through the online survey tool, Survey Monkey, containing a link to the pilot survey (Appendix C). Recipients were asked to email comments to the author. The same email was sent after one week as a reminder to recipients who had not responded. Three responses were received for a 33% response rate. Five questions were eliminated and two others edited as a result of participant comments.

Data Collection

Prior to the survey’s release, law library expert Dr. Yvonne Chandler, Associate Professor, University of North Texas, College of Information, Department of Library and Information Science and chair of this candidate’s dissertation committee, sent an email announcement to prospective survey participants explaining the significance and nature of this research. Steps taken to ensure confidentiality were outlined. A copy of the announcement sent by Dr. Chandler is in Appendix D.

Data was collected using Survey Monkey, a web-based online survey instrument. To ensure confidentiality each response was assigned a code combining the firm’s Revenue per Lawyer and Revenue per Equity Partner rank in that order. An example of a code would be 01-02 meaning that firm was ranked number one on the Revenue per
Lawyer ranking and number two on the Revenue per Equity Partner ranking. The code key was known only to this researcher.

An invitation to complete the survey was emailed to the most senior law library administration in each of the 179 firms (Appendix E) in the survey population sample. The same criteria were used to choose participants for both the pilot study and the study survey. The link in each email was customized to include the recipient’s code assigned by this researcher as a means of ensuring confidentiality for the participant. The survey (Appendix F) was open a total of four weeks. At the end of week one, a reminder email (Appendix G) was sent again to participants who had not yet responded. This process was repeated at the end of week two. A “last call” reminder was sent after 3 weeks (Appendix H). A final appeal to participate was sent by Dr. Chandler during the fourth week to administrators at the 50 highest ranked firms on the basis of Revenue per Lawyer and Revenue per Equity Partner who had not yet responded (Appendix I). The final appeal was sent only to the 50 highest ranked firms who had not yet responded in an attempt to get a better balance of responses from high and low ranked Am Law firms.

A total of 61 responses out of a possible 179 were received for a 34% response rate. Surveys were checked for consistency, errors, missing or skipped data. Ten surveys were discarded because the respondents answered three or fewer questions. The final valid response rate was 28.5%. Though this response rate was less than the 50% ideal return rate, the respondents were considered representative of the survey population sample. When participants were ranked according to Revenue per Equity Partner, they were about evenly divided. Twenty-four firms (47%) fell into the High
Revenue per Equity Partner segment and 27 (53%) firms fell into the Low Revenue per Equity Partner segment. Placement of a law firm into the higher or lower rank was based on the mean of Revenue per Equity Partner. The mean of the adjusted sample population of all Am Law 200 firms which was $2,421,128. The mean of the adjusted sample population for all survey participants was almost the same: $2,400,000.

A higher response rate from the lower ranked Revenue per Equity group was expected. Larger firms tend to be more restrictive about releasing any data about the firm. There were 24 participants from the higher ranked firms and 27 participants from the lower ranked firms.

Data Analysis

This study sought to provide empirical evidence to support strategic decision-making by law library administrators in the administration of their libraries. It did that by identifying characteristics (independent variables) common to law libraries serving highly profitable private law firms, the top 0.42% firms in the United States, and analyzing their impact on Revenue per Equity Partner, the measure selected to represent a firm’s financial performance (dependent variable).

Library characteristics chosen as study independent variables were:

A) Law Library Administrator and Staff

1. To whom the library director/head/manager reports.

2. Departments managed by the library administrator in addition to the library.

3. Staff education.

4. Staff professional development opportunities.

5. Size of library staff.
6. Staff years of experience.
7. Ratio of library staff to attorneys.
8. Ratio of professionals to library technical/support staff.

B) Law Library Management

9. Information services offered.
10. The law library's role in its firm's website, Internet or intranet.
11. Total number of libraries at all firm locations.
12. Library staff yearly average hours client billed hours.
13. Library staff billing rate.
15. Budget per lawyer.
16. Participation in blogs, wikis, or social networks.
17. Outsourcing activities.
18. Law firm wants to downsize library.
19. Law firm aggressively supports library.
20. Data collected to demonstrate value to the firm.
21. Method used to communicate value to practice management.
22. Categories of library collection content.
23. Law firm practice areas for whom the library does the most work.

C) Law Library Knowledge Management Activities

24. Top three law firm's knowledge management objectives.
25. Knowledge management strategy.
26. The library's role in firm knowledge management activities.
Selection of Statistical Techniques for Analysis

IBM Statistical Package for the Social Sciences (IBM-SPSS 15.0) and Microsoft® Excel 2007 were used to generate the data analysis results found in this report. Three parametric (independent t-test, one-way analysis of variance – ANOVA, and linear regression) and three non-parametric (Mann-Whitney $U$, chi-square, and Pearson correlation) statistical analysis techniques were used.

An independent t-test was selected because it examines the variation between two related samples of parametric data and determines whether the means of those samples statistically differ. A failure means the two samples do not appear to be different, while a successful test indicates that the two samples seem to have something making them settle around differing points. The t-test was used to determine significance and difference between a parametric type of independent variable (law library characteristic) and the dependent variable (law firm profitability).

Linear regression looks at scalar, normally distributed, paired-sample data, but from two different measurements. The test determines if changes in one measure correlate to changes in the other, reporting the strength of the correlation with a Pearson’s product moment correlation statistic. The result of the test tells if the two measures appear related to one another, the strength of that relationship, and the level of certainty that the relationship is not just due to random error. This test was used to test degree of relationship (but not direction) of the independent variable full-time employee per library to Revenue per Equity Partner.

Analysis of variance hereinafter referred to as ANOVA was used on parametric data (categorical or rank data) to determine if three or more sample means were
statistically significant. It is equivalent to a t-test with the exception of the number of sample means (two or fewer) being tested. Between group variance and within group variance are measured to develop an F score, the test statistic which determines whether or not to reject the null hypothesis of no difference. The larger the between group variance, the more likely there is a significant difference. The smaller the within group variability, the more likely there is a significant difference. If the probability (p-value) is greater than a pre-set value, usually 0.05, the null hypothesis is not rejected since there is a lack of evidence to prove the populations means are different from each other (Vaughan, 2001). The larger the F score, the greater the probability there is a difference in the population means so the lower the probability the null hypothesis is true.

ANOVA was used when three or more sets of data had to be compared rather than multiple t-tests because it saves time and type I errors are held at the 0.05 level. The type 1 error in multiple t-tests can be much higher than in one ANOVA test (Vaughan, 2001). An ANOVA was used to test changes in the dependent variable, Revenue per Equity Partner when compared according to the independent variable, “To whom does the law library administrator report?”

To determine whether findings were statistically significant and to control for Type I errors, the Mann-Whitney U test was performed on certain non-parametric data to test the hypotheses, to answer research question one (Q1) and to reduce the threat to conclusion validity. The test statistic for the Mann-Whitney U evaluates the discrepancy in ranks between two groups and indicates the probability of a significant difference between the two groups. If the p-value is less than 0.05, the conclusion is
the difference is statistically significantly and the null hypothesis is rejected. This step was important to this study because of the large number (493) of independent variables. Type I errors are considered “false positive,” that is finding a relationship exists when there is none. Type I error occurs when the null hypothesis is rejected though it is correct (Vaughan, 2001). A 0.05 “level of significance” or “confidence level” is frequently used to determine if a finding is valid or a coincidence. Mann-Whitney $U$ was used to determine significance and difference in impact of an independent variable to law firm profitability for firms in the High Revenue per Equity Partner vs firms in the Low Revenue per Equity Partner.

The Pearson’s correlation coefficient was used to determine whether two variables were related when one variable was ordinal and the other interval or ratio, or when both variables were interval or ratio and the distribution for one or both variables was badly skewed. This is especially applicable to this study since the dependent variable is a monetary value -- ratio data -- and a majority of the independent variables are nominal data. Correlations in this study assume the dependent variable and the correlated independent variables represent data that only indicates the order of the outcomes and are not indicative of any relative distances between them.

Chi-square tests were used to examine relationships between two variables with nominal or ordinal data by summarizing the discrepancies between the observed and expected frequency. The larger the chi-square score, the larger the discrepancy and the more likely it was that the two variables being studied were related. When the probability (the p-value) is equal to or smaller than a pre-set value, usually 0.05, the
conclusion is there is a statistically significant relationship between two variables so the null hypothesis is rejected (Vaughan, 2001).

Data was analyzed in the context of providing answers to four research questions (Q) and to assess whether to accept or reject one major and two minor hypotheses. Not all independent variables were used to support resolution of the research questions and to test each hypothesis.

Research questions for this study were:

Research Question 1 (Q1) - To what extent do characteristics of law libraries serving the 200 highest grossing private law firms headquartered in the United States (Am Law 200) and private firm law library industry benchmarks for these characteristics differ?

Research Question 2 (Q2) – To what extent are law library characteristics a factor in Revenue per Equity Partner rank, a measure of law firm profitability?

Research Question 3 (Q3) – To what extent do characteristics of law libraries serving the highest and lowest ranked Am Law 200 firms differ when ranked on the basis of Revenue per Equity Partner?

Research Question 4 (Q4) To what extent are private law firm profitability and law library participation in firm knowledge management activities related?

Hypotheses for this study were:

Major Hypothesis: There is no significant difference in the characteristics of law libraries serving the highest ranked private law firms and characteristics of law libraries serving the lowest ranked private law firms in the 200 highest grossing
private law firms in the United States, the Am Law 200, where rank is based on a financial measure of relative profitability.

Minor Hypotheses:

1) There is no significant difference in characteristics of law libraries serving the Am Law 200 and other private law firm libraries.

2) There is no significant difference in participation in law firm knowledge management activities by law libraries serving the highest ranked private law firms and law libraries serving the lowest ranked private law firms in the Am Law 200 according to Revenue per Equity Partner (RPEP).

Methodological Issues

Assumptions

It was assumed that all answers are true even though data is self-reported. Another assumption is that all law library administrators participating in the survey have access to data about all firm libraries so they are able to supply aggregate answers to survey questions.

Validity

The survey instrument was tested for validity in two ways, the pilot study previously described, and using the concept of content validity. Content validity checks the operationalization of the research against the relevant content domain for the construct, i.e., characteristics of law libraries (Trochim, 2006). Both were appropriate. There were multiple studies of law libraries containing survey instruments to serve as models for constructing an instrument. A content analysis could be performed on this
body of research on private law libraries. Most of the independent variables selected for
the study appear in prior studies, the majority of which have been repeated multiple
times over a period of years.

Reliability

Reliability relates to other researchers’ ability to “discover the same phenomena
or generate the same constructs as an original researcher if they did studies in the
same or similar settings” (Schensul, Schensul, & LeCompte, p. 275). Reliability cannot
be calculated but it can be estimated. The value of a reliability estimate tells us the
proportion of variability in the measure attributable to the true score (Trochim, 2006).
The survey was considered reliable because it was modeled on multiple surveys
previously conducted in the same manner on the same but larger representative
population.

Summary

In this chapter, survey participants and dependent and independent variables
were described. Design of the research and selection of the law firm profitability ranking
was discussed. Development of the outcomes benchmarking survey instrument and its
validity and reliability testing were reported. Selection of data analysis software
packages and the statistical analysis techniques were described.

Unlike prior studies where summary analysis of law library characteristics of all
respondents was reported, this research study was designed to permit data analysis of
library characteristics according to an individual firm’s Revenue per Equity ranking.
CHAPTER 4

RESULTS

This chapter describes the study sample population and responses, dependent and independent variables, and reports study results according to the study’s four research questions. It concludes with study hypotheses test results.

Introduction

The study population sample was firms listed on the 2008 Am Law 200, a ranked listing of the 200 highest grossing private law firms headquartered in the United States. The survey sample population totaled 179 firms or 90% of the accessible population (Table 1). Ten firms had dissolved or merged since the 2008 list was published in May and June, 2008. No contact information could be found for librarians in the sources used for this study at 11 firms. Those firms were also eliminated.

<table>
<thead>
<tr>
<th>Number of Firms Invited to Participate</th>
<th>Number of valid Survey Responses</th>
<th>Participation Percentage</th>
<th>Participant Firm Revenue Per Equity Partner Range</th>
<th>Participant Number of Lawyers per Firm Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>179</td>
<td>51</td>
<td>28.5%</td>
<td>$8,928,571 to $966,867</td>
<td>130 - 936</td>
</tr>
</tbody>
</table>

Survey Responses

A total of 61 surveys were returned for a 34% response rate. No respondent answered all of the questions. Ten respondents answered no more than three of the 25 questions so their responses were discarded as unusable. Number of respondent
answers for each question ranged from a low of 36 to a high of 48. It was decided that results would not be biased if the remaining 51 surveys were used since no participant answered all of the questions and the unanswered questions followed a random pattern. The final response rate for usable surveys was 28.5%.

Research Questions

The research questions guided comparison of the Am Law 200 law library characteristics to industry standards, and subsequent interpretation of the relationship of those characteristics to law firm profitability within the Am Law 200 itself.

Research Question 1 (Q1) - To what extent do characteristics of law libraries serving the 200 highest grossing private law firms headquartered in the United States (Am Law 200) and private firm law library industry benchmarks for these characteristics differ?

Research Question 2 (Q2) - To what extent are law library characteristics a factor in Revenue per Equity Partner rank, a measure of law firm profitability?

Research Question 3 (Q3) - To what extent do characteristics of law libraries serving the highest and lowest ranked Am Law firms differ when ranked on the basis of Revenue per Equity Partner rank?

Research Question 4 (Q4) -- To what extent are private law firm profitability and law library participation in firm knowledge management activities related?

Dependent and Independent Variables

Twenty-six characteristics of Am Law firm law libraries were selected as the independent variables for the study. Data had to be collected for a broad range of law library characteristics to be able to answer the research questions.
For this study, an industry standard (IS) or benchmark of an independent variable is defined as the most current descriptive (or numerical) representation of a law library characteristic as reported in recurring authoritative law library research. The most recent data points reported for the independent variables in this research study come from one of the following surveys:


Not all of the independent variables were used to answer every research question. Independent variables used in this study are divided into three categories to bring clarity to the results discussion: Law Library Administrator and Staff, Law Library Management, and Law Library Knowledge Management Activities. These are the same categories used to organize the independent variables and the survey instrument so data point, data collection, and data analysis and discussion are linked. The categorized list of independent variables follows:

A) Law Library Administrator and Staff

1. To whom the library director/head/manager reports.
2. Departments managed by the library administrator in addition to the library.
3. Staff education.
4. Staff professional development opportunities.
5. Size of library staff.
6. Staff years of experience.
7. Ratio of library staff to attorneys.
8. Ratio of professionals to library technical/support staff.

B) Law Library Management

9. Information services offered.
10. The law library’s role in its firm’s website, Internet or intranet.
11. Total number of libraries at all firm locations.
12. Library staff yearly average hours /client billed hours.
13. Library staff billing rate.
15. Budget per lawyer.
16. Participation in blogs, wikis, or social networks.
17. Outsourcing activities.
18. Law firm wants to downsize library.
19. Law firm aggressively supports library.
20. Data collected to demonstrate value to the firm.
21. Method used to communicate value to practice management.
22. Categories of library collection content.
23. Law firm practice areas for whom the library does the most work.

C) Law Library Knowledge Management Activities

24. Top three law firm's knowledge management objectives.
25. Knowledge management strategy.
26. The library’s role in firm knowledge management activities.

After ruling out Gross Revenue (GR), the basis of the Am Law 200 rankings, two measures of financial rank which could be used to identify relative profitability were considered for the dependent variable measure: Revenue per Lawyer (RPL), and Revenue per Equity Partner (RPEP). The 2008 Am Law 200 rankings provide the information for study calculations.

The skewness and kurtosis for Revenue per Lawyer was within the -/+1 range indicating a near-normally distribution for this potential dependent variable. Revenue per Equity Partner required further analysis and adjustment. One outlier skewed what appeared to be an otherwise reasonably normal distribution so winsorizing the data was appropriate (Tukey, 1962, p.18). The Revenue per Equity Partner .95 percentile was a value of $5,330,520 so the one value ($6,119,792) above the RPEP 95 percentile was remarked to 5,330,520. The result left the revised measure of Revenue per Equity Partner (RPEP-Rev.) nearly normal.

Although the distribution was reasonably normal for Revenue per Lawyer (RPEP), visual charting revealed one outlier. To further normalize this distribution, Revenue per Lawyer was also winsorized. The RPL .95 percentile was a value of $1,104,000 so the one value ($1,365,000) above the RPL .95 percentile was remarked to $1,104,000.

Summary descriptive statistics of Revenue per Equity Partner and Revenue per Lawyer are displayed in Table 2. These minor adjustments improved the normality of the dependent variable distributions and tightened their standard deviations without dramatic efforts on their mean scores. The revised Revenue per Lawyer (RPL) and
Revenue per Equity Lawyer (RPEP) were the measures used for the remainder of this report.

Next a Pearson correlation test was run on Revenue per Lawyer (RPL), and Revenue per Equity Partner (RPEP) (see Table 3). Both factors were significantly related so future analysis focused on the Revenue per Equity Partner dependent variable alone since it is the highest indicator of true firm profitability, Profit per Equity Partner (Gibson, 2002).

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Summary Statistics for Potential Dependent Variable Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
</tr>
<tr>
<td>RPL Orig.</td>
<td>$410,000</td>
</tr>
<tr>
<td>RPL Rev.</td>
<td>$410,000</td>
</tr>
<tr>
<td>RPEP Orig.</td>
<td>$969,512</td>
</tr>
<tr>
<td>RPEP Rev.</td>
<td>$969,512</td>
</tr>
</tbody>
</table>
Table 3

**Correlations of Proposed Dependent Variables**

<table>
<thead>
<tr>
<th></th>
<th>RPL</th>
<th>RPEP</th>
<th>NUMLAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPL</td>
<td>Pearson</td>
<td>RPL</td>
<td>RPEP</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>.784**</td>
<td>.402**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.003</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>51</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>RPEP</td>
<td>Pearson</td>
<td>RPEP</td>
<td>NUMLAW</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td>.784**</td>
<td>.586**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>51</td>
<td>51</td>
<td>51</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

For the purposes of data analysis and to test study hypothesis concerning differences in law library characteristics associated with high vs. low law firm profitability, the Am Law firms participating in the study were divided into two groups. The mean of the Revenue per Equity Partner measure for all study participants was used as the dividing point. Participating firms were assigned to the High Revenue per Equity Partner group \((n = 24)\) if their Revenue per Equity Partner was > $2,400,000 and to the Low Revenue per Equity Partner group \((n = 27)\) if their Revenue per Equity Partner was < $2,400,000. Table 4 summarizes differences in the two groups designated High Revenue per Equity Partner, hereinafter referred to as HRPEP, and Low Revenue per Equity Partner, hereinafter referred to as LRPEP.
The rankings did not correlate to the original Am Law 200 rankings. When the survey responses were ranked on the basis of Revenue per Equity Partner (Table 5), survey respondents designated High Revenue per Equity Partner firms fell within ranks 1 – 117. Survey respondents designated Low Revenue per Equity Partner firms fell within ranks 118 – 200. An Am Law firm might be in the top 100 when ranked according to Gross Revenue but in the bottom 100 when ranked according to Revenue per Equity Partner.

### Table 4

<table>
<thead>
<tr>
<th>High Revenue per Equity Partner (HRPEP) Law Firms vs. Low Revenue per Equity Partner (LRPEP) Law Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HRPEP</strong></td>
</tr>
<tr>
<td>Mean RPEP</td>
</tr>
<tr>
<td>Number</td>
</tr>
<tr>
<td>RPEP Rank Indicator</td>
</tr>
</tbody>
</table>

The rankings did not correlate to the original Am Law 200 rankings. When the survey responses were ranked on the basis of Revenue per Equity Partner (Table 5), survey respondents designated High Revenue per Equity Partner firms fell within ranks 1 – 117. Survey respondents designated Low Revenue per Equity Partner firms fell within ranks 118 – 200. An Am Law firm might be in the top 100 when ranked according to Gross Revenue but in the bottom 100 when ranked according to Revenue per Equity Partner.

### Table 5

<table>
<thead>
<tr>
<th>Law Firm Study Participation by High (HRPEP) &amp; Low (LRPEP) Revenue per Equity Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Invited to Participate</strong></td>
</tr>
<tr>
<td><strong>HRPEP Rank</strong></td>
</tr>
<tr>
<td>1-117</td>
</tr>
<tr>
<td><strong>LRPEP Rank</strong></td>
</tr>
<tr>
<td>118-200</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
</tr>
</tbody>
</table>

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Study Results

In this section results are mapped to each research question to prepare for hypotheses testing. For each research question, results are further organized into the same three categories used to organize the independent variables and the survey instrument. Data point, data collection, and data analysis and discussion are linked according to: Law Library Administrators and Staff, Law Library Management, and Law Library Knowledge Management Activities.

Am Law Library Characteristics and Industry Standard Benchmarks

Study results are presented for Research Question 1 (Q1), “To what extent do characteristics of law libraries serving the 200 highest grossing private law firms headquartered in the United States (Am Law 200) and private firm law library industry benchmarks for these characteristics differ?”

Law Library Administrators and Staff

This section reviews study findings related to Law Library Administrators and staff for Research Question 1 (Q1).

A summary of findings for Law Library Administrator and staff related independent variables for which industry standards exist follows.

- To whom the Law Library Administrator reports: This study found the greatest majority of Am Law firm law library Administrators (44%) report to the Chief Operating Officer/Director of Administration/Executive Director followed by Chief Executive Officer/Chief Legal Officer or Managing Partner (24%). Industry-wide, law firm library Administrators are most likely to report to the Library Committee/ Managing Partner (41%) or Chief
Operating Officer/Director of Administration/Executive Director (37%)
(Canadian Association of Law Libraries Study of Private and Corporate law libraries, 2005).

Law Library Administrators in Am Law firms can be described as different from administrators in other private law firm libraries. They are positioned at a higher organizational level within the firm and are more likely to manage departments in addition to the library. They align library staff support with the most profitable practices within the firm. This last characteristic mirrors Am Law firms' concentration on more profitable practice areas to protect their rate structure by (DiPietro, 2008).

The Law Library Administrator in an Am Law Library appears to be more successful in negotiating resources for their library than administrators at other private law firm libraries. This success can be seen in the majority of characteristics in this category which are a function of budget and related to workplace environment. Since this study is concerned with productivity and profitability, the relationship of knowledge-worker productivity to a desirable workplace is an important validation (Drucker, 1999a).

- Departments, other than the library, managed by the Law Library Administrator: This study found that almost one out of two (45%) Law Library Administrators at Am Law firms manage other departments in addition to the library. Those departments are Knowledge Management (12.5%), Competitive Intelligence (10%), or Docket Research (8%). Industry-wide Records Management (11%) and Knowledge Management (8%) departments are most frequently a part of the Law Library
Administrator’s responsibility though only 19% report they manage any additional departments (AALL Biennial Salary & Organizational Characteristics, 2009). The increased responsibilities of Am Law Library Administrators could be another contributor to their higher status within the firm.

- Number of library staff: Am Law 200 private law firms employ 40% more library staff and 33% more librarians than the industry average. Am Law firms employ an average of nine library staff per firm of which six are library professionals. The industry standard for private law firm libraries is an average of six and one-half staff per firm of which only four and one-half are library professionals (AALL Biennial Salary & Organizational Characteristics, 2009).

Employees are critical to sustaining a competitive advantage. “Business law firm’s services are sold and purchased mainly as a function of personal and professional relationships” (Gibson, 2002, p.2). Law firms recognize clients are attracted by experienced, educated members who are experts in their field. This applies to all departments in a law firm, not just lawyers. Studies have shown that understanding the business, industry, and market in which an employer operates is essential for information services to deliver the more complex services such as data analysis by library staff (Matarazzo & Prusak, 1995; Matarazzo, Prusak, & Gauthier, 1990).
• Ratio of library staff to lawyers: The ratio of library staff to lawyers at Am Law libraries average 1: 42 compared to the industry standard ratio of 1:39 (AALL Biennial Salary & Organizational Characteristics, 2009).

• Ratio of library professionals to support and technology staff: Law libraries serving Am Law 200 firms have more support and technical staff, one for every 1.68 professionals. Industry standard is one technical and support staff for every 2.8 professionals. Professionals can do more complex work which increases the library’s overall value when there is staff to handle the routine work. The increase in technology library staff can be accounted for by Am law firms’ adoption of new technologies. For example, a recent survey found that all but 25% of lawyers in private law firms are using hand-held devices (Curle, 2009). Am Law libraries have responded by placing technology staff in their libraries. Greater technical and subject expertise by library staff is a characteristic of a highly productive organization (Koenig, 2000).

Another characteristic of libraries serving highly productive organizations is that more time is spent developing more sophisticated information systems by the library staff (Koenig, 2000). Technology staff makes it possible for Am Law libraries to play an integral role in technology related information management activities undertaken by the firm. Am Law libraries staff have the skill set to be early adopters of new technologies to improve access for their customer base. Research by Mondschein, Ginman, King Research, Inc. and others have validated the theme of greater access to and use of information services by more productive individuals across all findings (Koenig, 1999).
• Library staff education: All Am Law 200 firm law library professionals have a Masters in Library Science and/or a Juris Doctor. The industry average of professionals holding either or both of these degrees is 70%. (AALL Biennial Salary & Organizational Characteristics, 2009 & Law Library Benchmarks, 2008-09).

Table 6 summarizes characteristics of Am Law library staff and compares them to industry standard (IS) benchmarks.

Table 6

<table>
<thead>
<tr>
<th></th>
<th>Am Law Library</th>
<th>Industry Standard (IS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total library staff / firm</td>
<td>9</td>
<td>6.5</td>
</tr>
<tr>
<td>Avg. Professional staff / firm</td>
<td>6</td>
<td>4.5</td>
</tr>
<tr>
<td>Avg. staff / library</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Ratio of library Staff : Lawyer</td>
<td>1 : 42</td>
<td>1 : 39</td>
</tr>
<tr>
<td>Ratio of Library Professional : Support / Technology staff</td>
<td>1.7 : 1</td>
<td>2.8 : 1</td>
</tr>
<tr>
<td>% Library Professionals with MLS and/or JD</td>
<td>100%</td>
<td>70%</td>
</tr>
</tbody>
</table>

• Staff average years of library experience: Library professionals at Am Law 200 firms have an average of nine or more years of experience (Table 7). This closely corresponds to the industry standard of 10+ years of experience for private law firm library professionals (American Association of Law Librarians, 2009).
Staff professional development: Professional development opportunities are offered by all Am Law 200 firms to library staff. Firms most often pay for membership dues in a professional association (94%), continuing education classes (84%), and professional association conference attendance (82%). On an industry basis, private law firms most often pay for professional association memberships (96%) or educational assistance (51%) of law library staff (AALL Biennial Salary & Organizational Characteristics, 2009). Lawyers are highly educated and have continuing education requirements overseen by Bar Associations. Investing in professional development for employees is an integral part of the law firm culture. Law librarians have historically aligned themselves with the legal profession rather than the library science profession since their profession developed from legal practitioners rather than from librarians (Brock, 1974).

<table>
<thead>
<tr>
<th>Job Category</th>
<th>0 – 5 Yrs</th>
<th>6 – 11 Yrs</th>
<th>&gt;11 Yrs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td>10% (n=9)</td>
<td>22% (n=19)</td>
<td>67% (n=58)</td>
<td>17% (n=86)</td>
</tr>
<tr>
<td>Librarian</td>
<td>25% (n=57)</td>
<td>40% (n=92)</td>
<td>35% (n=83)</td>
<td>46% (n=232)</td>
</tr>
<tr>
<td>Library Assistant</td>
<td>39% (n=64)</td>
<td>34% (n=55)</td>
<td>27% (n=45)</td>
<td>32% (n=164)</td>
</tr>
<tr>
<td>Technical/Systems</td>
<td>24% (n=6)</td>
<td>52% (n=13)</td>
<td>24% (n=6)</td>
<td>5% (n=25)</td>
</tr>
<tr>
<td>Totals</td>
<td>27% (n=136)</td>
<td>35% (n=179)</td>
<td>38% (n=192)</td>
<td>100% (n=507)</td>
</tr>
</tbody>
</table>
Staff Outsourcing: Outsourcing is used primarily by Am Law Libraries to handle loose-leaf filing or pocket part replacement (87%), photocopying and document delivery (36%) and printing/binding (31%). Law libraries generally seldom outsource anything but loose-lease filing or pocket part replacement was most frequently outsourced (30%) (Law Library Benchmarks, 2008-09).

Law Library Management

This section reviews study findings related to law library management for Research Question 1 (Q1). Am Law firm libraries can be described as different from libraries in other private law firm libraries. Am Law libraries have twice the library locations and substantially bigger budgets than other private law firm libraries. A summary of findings for independent variables in this category follows.

- Downsizing or supporting law libraries: Slightly fewer Am Law firms want to downsize their libraries but maintain them with a stable budget (49%) than the industry standard (56%). Conversely, about a quarter (27%) of Am Law firms aggressively support their libraries, less than the industry standard of 37%. Smaller firms with fewer lawyers tended to more aggressively support the law library (Law Library Benchmarks, 2008-09).

- Library budgets: Budgets of Am Law firm libraries are slightly more than double other law library budgets (Table 8). The average annual Am Law firm library budget is $3,880,227. The industry annual average budget for private law libraries is $1,540,441 (Law Library Benchmarks, 2008-09). Average annual budget per lawyer by Am Law firm libraries ($8,484) is
14% less than the average annual budget per lawyer ($9,810) for other law firms (AALL Biennial Salary & Organizational Characteristics, 2009).

Table 8

Comparison of Am Law Library and Other Private Law Firm Library Budgets

<table>
<thead>
<tr>
<th></th>
<th>Am Law Libraries</th>
<th>Industry Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Annual Budget</td>
<td>$3,880,227</td>
<td>$1,540,441</td>
</tr>
<tr>
<td>Average Number of Lawyers / Firm</td>
<td>862</td>
<td>128</td>
</tr>
<tr>
<td>Avg. Annual Budget / Lawyer</td>
<td>$8,484</td>
<td>$9,810</td>
</tr>
</tbody>
</table>

- Bill rate for library staff time: Am Law firm libraries use multiple hourly billing rate schedules for library staff services: $101-$150 (60%), $151-$200 (45%), >$201 (36%). This is consistent with the rate schedules ranging from $100 to >$200 used by other law firm libraries (AALL Biennial Salary & Organizational Characteristics, 2009 & Canadian Association of Law Libraries Study of Private and Corporate law libraries, 2005). One characteristic of the Am Law 200 firms is a focus on productivity – billable hours (DiPietro, 2006), so consistency in library staff billing rates across all private law libraries is to be expected.

- Billable hours of library staff time: Law firm libraries bill fewer hours (25 to 800) annually than the industry average (179 to 1,275) (AALL Biennial Salary & Organizational Characteristics, 2009). Am Law libraries are more likely to charge at the >$200 per hour rate so they average the same revenue as smaller firms who charge less but bill more hours.
- Number of library locations: Am Law firms average six separate library locations per firm, twice as many as the three locations of other private law firms reported in Law Library Benchmarks, 2008-09. This is typical of contemporary law practices which have multiple office locations with collections tailored to areas of practice for each location. The 2009 Am Law Librarian Survey reported Am Law firms had libraries at 44% of their locations.

- Law Library collections: Direct comparison of Am Law 200 law library information resources to private law firm library standards could not be made. Prior studies of law library collections focused on format (print and/or online), type (periodicals, books, print reporters, directories, magazines and newspapers), and spending on print and electronic versions. This study investigated law library collections by specific topics, format (print or online), and asked how the content was licensed for access: use only in a firm library; use only by a limited customer group of users; use by anyone in the firm.

Table 9 summarizes the top five information resources for each of the possible ways content could be licensed or accessed identified in this study. As expected, legal resources, business resources and newspapers/journals covering current events are the most popular resources. Treatises, journals, and newspapers are offered in print and electronic format. Online databases are licensed in multiple ways. Legal information sources tend to be globally licensed for access by all firm employees. Other electronic resources tend to have more restrictive licenses.
**Table 9**

*Top Five Information Resources Purchased by the Am Law Library According to Format and License*

<table>
<thead>
<tr>
<th>Rank</th>
<th>Print</th>
<th>Electronic-Global License</th>
<th>Electronic-Restricted License</th>
<th>Electronic-Library Only License</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Loose-Leaf Services (100%)</td>
<td>Case Law &amp; Reporters (91%)</td>
<td>Online databases (61%)</td>
<td>Online databases (39%)</td>
</tr>
<tr>
<td>#2</td>
<td>Treatises (98%)</td>
<td>Dockets (90%)</td>
<td>Benchmarking Studies (59%)</td>
<td>Market Research (36%)</td>
</tr>
<tr>
<td>#3</td>
<td>Books &amp; CDs/DVD (91%)</td>
<td>Law Journals (88%)</td>
<td>Tax Forms &amp; Sources (57%)</td>
<td>Journals &amp; Newspapers (33%)</td>
</tr>
<tr>
<td>#4</td>
<td>Journals &amp; Newspapers (82%)</td>
<td>Online databases (86%)</td>
<td>Journals &amp; Newspapers (56 %)</td>
<td>Industry &amp; Analysts Reports (29%)</td>
</tr>
<tr>
<td>#5</td>
<td>Conference Proceedings (79%)</td>
<td>Expert Witness Documentation (81%)</td>
<td>Treatises (53%)</td>
<td>Business &amp; Management Content (24%)</td>
</tr>
</tbody>
</table>

- Type of library collections catalog: A union catalog which includes holdings for all library locations is used by 90% of reporting firms. This type of catalog provides access to all library content for all firm employees irrespective of where they are located. Many contemporary law firms have multiple locations but not all locations have libraries. Industry standards for private law firms with multiple libraries are about evenly divided on whether they use a union catalog with holdings from every library (24%) or a separate catalog for each library location (21%) (Canadian Association of Law Libraries Study of Private and Corporate Law Libraries, 2006).
- Law library services: The majority of prior studies of law library services have focused on online legal resources, legal resource CDs, and other electronic products and CDs. This study investigated a series of topical services and how and where they could be requested, accessed, or used (see Table 10). A single prior study did provide a ranked list of services most frequently offered (Carroll & Chandler, 2004) by private law firms so comparisons of some Am Law 200 law library services to private law firm library services could be made. This should not be considered a comparison to industry standard benchmarks.

<table>
<thead>
<tr>
<th>Rank</th>
<th>In the Library</th>
<th>@ Firm Location</th>
<th>Remote Location</th>
<th>Using Mobile Device</th>
<th>Social Network</th>
<th>Other Private Law Libraries</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Reference or Research (100%)</td>
<td>Training on Library Resources (84%)</td>
<td>Library Catalog (68%)</td>
<td>Reference or Research (58%)</td>
<td>Blogs, Wikis, Social Networks (38%)</td>
<td>Training on Library Resources (78%)</td>
</tr>
<tr>
<td>#2</td>
<td>Acquisition (98%)</td>
<td>Court Info (83%)</td>
<td>Court Info (66%)</td>
<td>Targeted News Svcs (56%)</td>
<td>Targeted Group Topic Pages (6%)</td>
<td>Circulation (78%)</td>
</tr>
<tr>
<td>#3</td>
<td>Circulation (95%)</td>
<td>Library Catalog (82%)</td>
<td>Targeted News Svcs (63%)</td>
<td>Acquisitions (56%)</td>
<td>Targeted News Svcs (5%)</td>
<td>Journal Subscription Services (74%)</td>
</tr>
<tr>
<td>#4</td>
<td>Legislative Histories (95%)</td>
<td>Desk Copies (82%)</td>
<td>Blogs, Wikis, Social Networks (63%)</td>
<td>Competitive Intelligence (54%)</td>
<td>Training on Library Resources (2%)</td>
<td>Competitive Intelligence (74%)</td>
</tr>
</tbody>
</table>
Participation in blogs, wikis, or social networks: Am Law firm law libraries are more likely to maintain blogs, wikis, or the firm’s social networking presence (38%) than the industry standard of 22% (Law Library Benchmarks, 2008-09). This can be attributed to the presence of skilled technology staff in Am Law libraries and the increasing use of these new technologies by law firm staff (Curle, 2009).

Participation in firm Internet, intranet, and/or websites: Study findings show Am Law libraries are an integral part of maintaining their firm’s Internet and intranet websites. All Am Law libraries (100%) prepared and updated their firm’s Internet and intranet web pages. Industry wide, only 27% of law libraries update their firm intranet pages.

Am Law libraries also report serving as liaisons to the intranet for practice groups (97%) or liaisons between vendors and firm IT departments for access to library managed online content (97%). Industry wide, a majority of law libraries (86%) serve on the firm’s Internet committee or play some other role in creating or updating their firm’s Internet website (Canadian Association of Law Libraries Study of Private and Corporate Law Libraries, 2006).
Law Library Knowledge Management Activities

Law Library Administrators in Am Law 200 firms report a dip in law library participation in knowledge management activities in 2008 to 75% from the 2007 rate of 84%. A slight gain to 79% in 2009 would indicate the beginning of a rebound in interest (2009 Am Law Librarian Survey).

- Knowledge management strategy: Study findings show only 20% of Am Law firms emphasize Knowledge Management, much less than the industry standard of 61% of law firms (Global Law Firm Knowledge Management Survey, 2006). This was an unexpected study finding with no apparent explanation since knowledge management has been shown to increase productivity. Clients expect firms to use knowledge management techniques to improve client service delivery and control legal costs (Caddell, 2007).

- Knowledge management objectives: This study found that the most important knowledge management objective for Am Law firms and the industry standard are the same: improving the quality of client service (2006 Canadian Association of Law Libraries Study of Private and Corporate Law Libraries & Global Law Firm Knowledge Management Survey, 2006).

- Law library knowledge management initiatives: The most important knowledge management objective for Am Law firms is also the number one initiative: improving client service and productivity (Table 11). The number one knowledge management initiative for other private law firms is
best practices and model documents. Am Law libraries contribute to almost all knowledge management initiatives in which their firms invest.

Table 11

<table>
<thead>
<tr>
<th>Initiative</th>
<th>% Participation by Am Law Firms</th>
<th>% Participation by Industry Standard</th>
<th>% Participation by Firm Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Practices &amp; Model Documents</td>
<td>84%</td>
<td>91%</td>
<td>44%</td>
</tr>
<tr>
<td>precedents/forms</td>
<td>91%</td>
<td>90%</td>
<td>44%</td>
</tr>
<tr>
<td>Firm Practice Area Information</td>
<td>100%</td>
<td>79%</td>
<td>29%</td>
</tr>
<tr>
<td>Firms Revenue, Costs, Profitability</td>
<td>100%</td>
<td>21%</td>
<td>30%</td>
</tr>
<tr>
<td>Skills &amp; Expertise locator</td>
<td>95%</td>
<td>67%</td>
<td>24%</td>
</tr>
<tr>
<td>Firm’s Market Position</td>
<td>100%</td>
<td>21%</td>
<td>43%</td>
</tr>
<tr>
<td>Clause Library</td>
<td>92%</td>
<td>60%</td>
<td>39%</td>
</tr>
<tr>
<td>Lessons Learned (Past Projects)</td>
<td>88%</td>
<td>48%</td>
<td>50%</td>
</tr>
<tr>
<td>Prospective Client</td>
<td>91%</td>
<td>31%</td>
<td>57%</td>
</tr>
<tr>
<td>Case Law</td>
<td>56%</td>
<td>75%</td>
<td>89%</td>
</tr>
</tbody>
</table>

Summary of Results for Research Question 1 (Q1)

Results comparing Am Law library characteristics and industry standard benchmarks can be used to answer Research Question 1 (Q1), “To what extent do characteristics of law libraries serving the 200 highest grossing private law firms headquartered in the United States (Am Law 200) and private firm law library industry benchmarks for these characteristics differ?” Am Law libraries are very different from other private law firm libraries. Eighty-one percent (17 out of 21) of the Am Law library characteristics with corresponding industry standard benchmark were different. The differences are summarized in Table 12. The majority of the differences are related to
budget. A distinguishing feature of Law Library Administrators in Am Law firms is their highly placed position within the firm. This reporting structure could be responsible in part for the higher level of success Am Law Library Administrators have in negotiating resources for their library than administrators at other private law firm libraries. Larger staffs including technologists, larger number of library locations, and reimbursement of tuition for college or university degrees are a function of budget and work place environment and indicative of success. It could also be that Am Law firm senior management recognizes that the more competitive the marketplace, the greater the information need and the greater the requirement to invest in information services and allocate accordingly (Koenig, 1999).
### Table 12

**Differences in Am Law Libraries and Law Library Industry Standard Benchmarks**

<table>
<thead>
<tr>
<th>Law Librarian Administrator &amp; Staff</th>
<th>Chief Operating Officer = 44%</th>
<th>Managing Partner Officer = 41%</th>
</tr>
</thead>
<tbody>
<tr>
<td>To whom the library Administrator reports</td>
<td>45%</td>
<td>19%</td>
</tr>
<tr>
<td>Other departments managed by library Administrator</td>
<td>45%</td>
<td>19%</td>
</tr>
<tr>
<td>Ratio Library Professional to Support/Technology staff</td>
<td>1.7 : 1</td>
<td>2.8 : 1</td>
</tr>
<tr>
<td>Average # of library professionals per firm</td>
<td>6</td>
<td>4.5</td>
</tr>
<tr>
<td>Average # of total library staff per firm</td>
<td>9</td>
<td>6.5</td>
</tr>
<tr>
<td>% Library Professionals with MLS and/or JD</td>
<td>100%</td>
<td>70%</td>
</tr>
<tr>
<td>Professional Development</td>
<td>100%</td>
<td>96%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Law Library Management</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Law firms that want to downsize the library</td>
<td>49%</td>
</tr>
<tr>
<td>Law firms that aggressively support the library</td>
<td>27%</td>
</tr>
<tr>
<td>Annual budget per lawyer</td>
<td>$8,484</td>
</tr>
<tr>
<td>Average library staff billable hours</td>
<td>25-800</td>
</tr>
<tr>
<td>Law libraries participate in Blogs, Wikis or Social Networks</td>
<td></td>
</tr>
<tr>
<td>Law libraries maintain &amp; update firm Internet</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Law Library Knowledge Management Activities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Management Strategy</td>
<td>20%</td>
</tr>
</tbody>
</table>
Only 19% (4 out of 21) of the Am Law library characteristics and industry standard benchmarks are similar. Three are principally related to stable, high quality service levels (Table 13) delivered by experienced, highly educated staff as would be expected in any department in a highly profitable private law firm. The last similarity, range in hourly billing rate for law library employees, reflects law firm attention to revenue sources. Consistency of the range in billable rate for library staff services would indicate rate schedules are well known across the industry and not considered a competitive advantage.

<table>
<thead>
<tr>
<th>Similarities in Am Law Libraries and Law Library Industry Standards</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Am Law Libraries</th>
<th>Industry Standard (IS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library staff-Average years of experience</td>
<td>≥9 years = 63%</td>
<td>&gt;10 years = 60%</td>
</tr>
<tr>
<td>Support for Professional Development</td>
<td>100%</td>
<td>94%</td>
</tr>
<tr>
<td>Ratio of library staff to lawyers</td>
<td>1 : 42</td>
<td>1 : 39</td>
</tr>
<tr>
<td>Range in hourly bill rate for library staff time</td>
<td>$100 - &gt;$200</td>
<td>$100 - &gt;$200</td>
</tr>
</tbody>
</table>

Am Law Library Characteristics and Law Firm Profitability

A statistical quantitative analysis of Am Law 200 firm law library characteristics to determine which were significantly related to an Am Law firm's Revenue per Equity
Partner rank, findings was conducted. Findings are summarized according to Law Library Administrators and Staff, Law Library Management, and Law Library Knowledge Management Activities categories. These are the same categories used to organize the independent variables and the survey instrument so data point, data collection, and data analysis and discussion are linked. Findings can be used to answer Research Question 2 (Q2) – “To what extent are law library characteristics a factor in Revenue per Equity Partner rank, a measure of law firm profitability?”

Further testing of characteristics shown to be significant determined the degree of difference in the Revenue per Equity Partner of firms in the High and Low Revenue per Equity ranks. These findings can be used to answer Research Question 3 (Q3) – “To what extent do characteristics of law libraries serving the highest and lowest ranked Am Law 200 firms differ when ranked on the basis of Revenue per Equity Partner?”

The discussion of study findings that answer Research Question 2 (Q2) and Research Question 3 (Q3) are combined.

As previously explained, law firms participating in this survey had to be divided into high and low ranks on the basis of the financial measure, Revenue per Equity Partner (RPEP), to compare characteristics associated with both the highest and lowest ranked private law firms. The mean of the participants’ Revenue per Equity Partner was selected as the dividing line for establishing high and low rank. Survey respondents with a firm RPEP >$2,400,000 were labeled High Revenue per Equity Partner firms hereinafter referred to as HRPEP. Survey respondents with a firm RPEP <$2,400,000 were labeled Low Revenue per Equity Partner firms hereinafter referred to as LRPEP.
Three parametric (independent t-test, linear regression and one-way Analysis of Variance (ANOVA) and three non-parametric (Mann-Whitney U, chi-square, and Pearson’s correlation) statistical analysis techniques were used as appropriate. An independent variable was first tested for significance in determining Revenue per Equity Partner rank, a measure of profitability and the study dependent variable. If found to be significant, further testing between and within HRPEP and LRPEP was conducted.

Law Library Administrators and Staff

This section reviews study findings related to Law Library Administrators and staff for Research Question 2 (Q2) and Research Question 3 (Q3).

To whom the Law Library Administrator reports may affect Revenue per Equity Partner particularly if the Administrator reports to the Chief Information Officer or the Chief Operating Officer.

To determine if this independent variable was a significant factor impacting Revenue per Equity Partner rank, a one-way ANOVA test (F test) was computed to compare differences in profitability across three positions to which an Am Law library Administrator is most likely to report (Table 14). The individual variables were Chief Executive Officer (CEO) or Managing Partner, Chief Information Officer (CIO) or Information Technology Director, or Chief Operations Officer (COO). The dependent variable was Revenue per Equity Partner. The F-test was chosen because it compares the means of two or more groups of non-parametric (ordinal or nominal) data, specifically the independent variables. For this group of independent variables, the F-test was marginally significant at the .064 level (N=45; F=2.932; p=.064).
Post hoc testing further showed that the group of Law Library Administrators reporting to the Chief Information Officer and the Chief Operations Officer were marginally significant at the 5% level (Tukey HSD = .053 for both). Mean Revenue per Equity Partner (RPEP) for all law library Administrators reporting to the CIO was $3,126,000; for those reporting to the CEO or Managing Partner $2,348,000; for those reporting to the COO or Director of Administration $2,077,000.

The High Revenue per Equity Partner group (HRPEP) group mean Revenue per Equity Partner was $3,377,409. Thirty-three percent of the law library administrators in this group report to the firm’s Chief Information Officer (CIO). See Table 15. Other law library administrators in this group report to the Chief Operations Officer (COO = 29%) or Managing Partner or Chief Executive Officer (CEO = 25%). This reporting structure reflects the importance assign to the role of technology in managing firm intellectual capital, and the perceived relationship of the law library to that function by the most profitable of the Am Law firms.

The Low Revenue per Equity Partner group (LRPEP) group mean Revenue per Equity Partner was $1,541,866. Forty-eight percent of the law library administrators in

<table>
<thead>
<tr>
<th>RPEP</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>7.904E12</td>
<td>2</td>
<td>3.952E12</td>
<td>2.932</td>
<td>.064</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5.661E13</td>
<td>42</td>
<td>1.348E12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6.451E13</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the Low Revenue per Equity Partner (LRPEP) group report to the Chief Operations Officer (COO). The rest report to the Managing Partner or Chief Executive Officer (CEO = 30%) or to the Chief Information Officer (CIO = 11%).

Table 15

Summary of Reporting Hierarchy for Am Law Firm Law Library Administrator

<table>
<thead>
<tr>
<th>Revenue Per Equity Partner / Group</th>
<th>CEO / CLO / MP</th>
<th>CIO</th>
<th>COO / Dir of Admn/ Executive Dir.</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary of all Responses /RP/PEP</td>
<td>24% (n=11)</td>
<td>20% (n=9)</td>
<td>44% (n=20)</td>
<td>12% (n=5)</td>
</tr>
<tr>
<td></td>
<td>$2,348,000</td>
<td>$3,126,000</td>
<td>$2,077,000</td>
<td></td>
</tr>
<tr>
<td>HRPEP: $3,377,409</td>
<td>25% (n=6)</td>
<td>33% (n=8)</td>
<td>29% (n=7)</td>
<td>13%</td>
</tr>
<tr>
<td>LRPEP: $1,541,866</td>
<td>30% (n=8)</td>
<td>11% (n=3)</td>
<td>48% (n=13)</td>
<td>11% (n=3)</td>
</tr>
<tr>
<td>Industry Std</td>
<td>14%</td>
<td>37%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Departments, other than the library, managed by the Law Library Administrator: The majority of Am Law Library Administrators (55%, n = 28) reported they managed only the law library but a large number of administrators (45%, n = 22) also manage another department. Thirteen percent of respondents reported a knowledge management department was also managed. Another 10% also managed a competitive intelligence unit. The expanded role of Law Library Administrators, though interesting, is not a factor in Revenue per Equity Partner rank. It could be a factor in
the placement of the Am Law Library Administrator within the firm organizational structure.

Revenue per Equity Partner was averaged for those who managed only the library and those who also managed other departments (Table 16), and a between groups independent samples t-test conducted. Mean Revenue per Equity Partner levels between the two groups, those who managed only the library ($2,334,081) and those who also managed other departments ($2,493,311) did not differ significantly (Sig. = .651) so no further analysis was required.

Table 16

<table>
<thead>
<tr>
<th>Between group t-test</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>RPEP Equal variances assumed</td>
<td>.651</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.651</td>
</tr>
</tbody>
</table>

The High Revenue per Equity Partner and Low Revenue per Equity Partner groups were also tested separately. A within group t-test of both groups revealed no significant difference within either of the two groups: High Revenue per Equity Partner (Sig. = .746, M = 142292.948, SD = 433289.267) and Low Revenue per Equity Partner (Sig. = .692, M = -77394.423, SD = 193100.211).

- Library staff education: One hundred percent of Law Library Administrators required their professional staff to have a Masters or PhD
of Library or Information Science (n = 44). Only six required a JD, MBA or second subject masters. See Table 17. Multiple answers were allowed. Revenue per Equity Partner was averaged for each of the two groups and a between groups independent samples t-test conducted. Mean Revenue per Equity Partner levels between the two groups, those who required the Masters or PhD of Library or Information Science ($2,437,291) and those who required a JD, MBA or second subject masters instead of or in addition to the Library or Information Science degree ($2,067,003) did not differ significantly (Sig. = .549). No further analysis was required. All Am Law libraries had essentially the same educational requirement for staff so education was not a factor in improving Revenue per Equity Partner rank.

Table 17

Comparison of Educational Requirements Among Law Library Administrators

<table>
<thead>
<tr>
<th>Between group t-test</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>RPEP</td>
<td>Equal variances assumed</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
</tr>
</tbody>
</table>

Responses for the High Revenue per Equity Partner and Low Revenue per Equity Partner groups were also tested separately. A within group t-test of both of these groups revealed no significant difference within either of the two groups as to library staff education: High Revenue per Equity Partner (Sig. = .308, M = 1181677.193, SD =
Staff average years of library experience: Years of staff work experience is not a factor in Revenue per Equity Partner rank. See Table 18. A series of within independent t-tests using the mean Revenue per Equity Partner of firms in the High Revenue per Equity Partner and Low Revenue per Equity Partner groups according to number of years of experience for each employee classification (Administrator, Library Professional, Library Assistant, and Technology Staff) were conducted. A near significant difference was identified only between those organizations that hired technical staff for the library and those that did not.

The average Revenue per Equity Partner of Am Law firms that did not hire technical staff in the library is 36% lower ($2,120,000) than those who did have technical staff assigned to the library ($2,889,000 / Sig. = .058). In the High Revenue per Equity Partner group, over half of the 23 respondents had technical staff assigned to the library. In the low RPEP group only five of the 27 respondents had technical staff assigned to the library. A cross-tab calculation of whether or not technical staff were assigned to the library between HRPEP and LRPEP groups was calculated to be significant (p<.01).
### Table 18

**Years of Library Staff Experience by Job Category**

<table>
<thead>
<tr>
<th>Job Classification</th>
<th>RPEP – High RPEP Firm vs. Low RPEP Firms</th>
<th>t-test for equality of means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>Administrator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>$2,552,913 – $2,330,245</td>
<td>.558</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td>.558</td>
</tr>
<tr>
<td>Library Professional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>$2,478,779 – $2,315,313</td>
<td>.639</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td>.639</td>
</tr>
<tr>
<td>Library Professional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>$2,307,909 – $2530130</td>
<td>.537</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td></td>
<td>.537</td>
</tr>
<tr>
<td>Library Technology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>Some – $2,889,428 vs. $2,120,081</td>
<td>.030</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>None -- $2,120,081</td>
<td>.058</td>
</tr>
</tbody>
</table>

- Number of law library staff: Each Am Law firm employs an average of nine library employees. They are typically dispersed two per firm library location. To explain the possible relationship between Revenue per Equity Partner and number of full-time employees, a Pearson correlation was calculated for the independent variable, number of full-time employees. See Table 19. There is a significant correlation (.491) between number of employees per library and Revenue per Equity Partner (p<.001) meaning for each library employee, Revenue per Equity Partner
was increased by $295,000 (Table 20). To explain the relationship, a
regression analysis on employees per library vs. Revenue per Equity
Partner was performed (Figure 2). Twenty-four percent of the variance in
Revenue per Equity Partner was accounted for by the independent
variable employees per /library.

Table 19

<table>
<thead>
<tr>
<th></th>
<th>RPEP</th>
<th>FTE per Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPEP Pearson Correlation</td>
<td>1</td>
<td>.491**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>51</td>
<td>47</td>
</tr>
<tr>
<td>FTE/L Library Pearson Correlation</td>
<td>.491**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>47</td>
<td>47</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)

Table 20

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant*</td>
<td>1855968.945</td>
<td>222060.754</td>
<td>.491</td>
<td>8.358</td>
</tr>
<tr>
<td>FTE per Library</td>
<td>294528.211</td>
<td>77890.453</td>
<td>.491</td>
<td>3.781</td>
</tr>
</tbody>
</table>
Staff professional development: Eight continuous measures of professional development were examined to determine if any were a factor in Revenue per Equity Partner rank. A series of Mann-Whitney $U$ tests were conducted on this non-parametric data to analyze differences in Revenue per Equity Partner for survey participants who did and did not offer staff professional development support. Only “tuition reimbursement for university coursework leading to a degree” was significant ($p=.002$)
among the independent variables. An independent t-test was run to test for differences in the mean of Revenue per Equity Partner of High Revenue per Partner and Low Revenue per Equity Partner Am Law firms who did and did not offer tuition reimbursement to library staff. The 11 firms that offered tuition reimbursement for university coursework leading to a degree had an average Revenue per Equity Partner of $3,410,852, while the 38 firms reporting they did not offer this development activity had an average Revenue per Equity Partner of $2,100,155. This indicates a strong presence ($N=49; t=3.457; p=.001$) of “tuition reimbursement for university coursework leading to a degree” (Table 21) in firms in the High Revenue per Equity Partner group. Only one out of 27 firms in the Low Revenue per Equity Partner group offered this benefit to library staff. Nearly half ($n = 10$) of the High Revenue per Equity Partner firms ($n=22$) offered this type of tuition reimbursement ($\chi^2 (1, N =49) = 12.138; p<.001$) according to a Chi-square test performed to determine significance of tuition reimbursement to Revenue per Equity Partner.

<table>
<thead>
<tr>
<th></th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>RPEP</td>
<td>Equal variances assumed</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
</tr>
</tbody>
</table>

Table 21

**Significance testing for Professional Development Activities**
Hourly billing rate was tested using a series of Mann-Whitney $U$ tests on mean range of categories of hourly billing rates for staff services to determine if billing was a factor in Revenue per Equity Partner rank. Hourly billing rates of $200$ and less were used by all firms but rates of $201$ and above are used predominately by the High Revenue per Equity Partner firms ($p=.006$). A t-test showed a significant mean difference with the $15$ firms reporting use of the higher billing rate for work done by the law library staff (Table 22). They had an average Revenue per Equity Partner of $3,217,000$, while the $27$ firms who did not use the higher billing rate had an average Revenue per Equity Partner of $2,057,000$ ($N = 42; t = 3.133; p = .003$). A high degree of connectivity between the High Revenue per Equity Partner firms and those that utilize a $201+$ billing rate for library staff work was confirmed through cross tabulations of participants answering this question to the firms in the High and Low Revenue per Equity Partner groups. Half of the $22$ firms in the High Revenue per Partner group bill at $201$ or higher per hour for library staff work but only three out of $23$ firms in the Low Revenue per Partner group do so.

**Table 22**

*Significance Testing for Library Staff Hourly Bill Rate*

<table>
<thead>
<tr>
<th></th>
<th>t-test for Equality of Means</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>Mean Difference</td>
<td>Std. Error Difference</td>
</tr>
<tr>
<td>RPEP assumed</td>
<td>Equal variances assumed</td>
<td>.003</td>
<td>1159745.858</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td>.007</td>
<td>1159745.858</td>
</tr>
<tr>
<td></td>
<td></td>
<td>370144.291</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>393889.080</td>
<td></td>
</tr>
</tbody>
</table>
Billable hours for Am Law library staff services range on average between 25 and 800 hours a year and are not a factor affecting Revenue per Equity Partner rank (Table 24). There did not appear to be any relationship between billable hours and the Revenue per Equity Partner of a firm (Table 23). Dividing the firms into the High and Low Revenue per Equity Partner groups confirmed there was not a significant difference in billable hours for the two groups ($N = 30; t = 1.059; p > .1$).

Table 23

*Significance Testing for Library Staff Annual Billable Hours*

<table>
<thead>
<tr>
<th></th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>RPEP</td>
<td>Equal variances assumed</td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
</tr>
</tbody>
</table>

Supporting certain law firm practice areas by the library is a factor affecting Revenue per Equity Partner rank. A series of Mann-Whitney $U$ tests were conducted to determine if areas of practice supported by the law library are significantly different between High Revenue per Equity Partner firms and Low Revenue per Equity Partner firms (Table 24). Eleven practice areas were significant ($p = .05$ or less). Using 5% significance testing, one would have expected 3.2 tests to be significant ($64 \times .05 = 3.2$). A chi-squared distribution test indicated the finding of 11 significant practice areas is not due to random chance ($\chi^2 (1, N = 64) = 7.691; p < .01$). This supports the assertion that areas of practice supported by the library are significantly different between High
Revenue per Equity Partner and Low Revenue per Equity Partner firms (Table 24). For example, over 50% of the Libraries in High Revenue per Equity Partner firms supported the practice areas of business law and white-collar crime. Less than 50% of libraries in Low Revenue per Equity Partner firms supported these practice areas.

### Table 24

*Practice Areas Significantly Related to Firm RPEP*

<table>
<thead>
<tr>
<th>Practice Area</th>
<th>No. of firms out of 47</th>
<th>RPEP supporting practice area (in millions)</th>
<th>RPEP not supporting practice area (in millions)</th>
<th>MW Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Securities</td>
<td>33</td>
<td>$2,745</td>
<td>$1,650</td>
<td>.003</td>
</tr>
<tr>
<td>White collar crime*</td>
<td>20</td>
<td>3,002</td>
<td>1,987</td>
<td>.004</td>
</tr>
<tr>
<td>Investments</td>
<td>9</td>
<td>3,569</td>
<td>2,147</td>
<td>.006</td>
</tr>
<tr>
<td>Technology &amp; Science</td>
<td>9</td>
<td>3,275</td>
<td>2,216</td>
<td>.010</td>
</tr>
<tr>
<td>Anti-trust and Trade Regulation</td>
<td>15</td>
<td>3,098</td>
<td>2,101</td>
<td>.015</td>
</tr>
<tr>
<td>Intellectual Property</td>
<td>31</td>
<td>2,697</td>
<td>1,881</td>
<td>.018</td>
</tr>
<tr>
<td>Finance</td>
<td>15</td>
<td>3,028</td>
<td>2,134</td>
<td>.034</td>
</tr>
<tr>
<td>Business Law*</td>
<td>23</td>
<td>2,831</td>
<td>2,024</td>
<td>.039</td>
</tr>
<tr>
<td>International Law</td>
<td>9</td>
<td>3,243</td>
<td>2,224</td>
<td>.040</td>
</tr>
<tr>
<td>Criminal Law</td>
<td>5</td>
<td>3,394</td>
<td>2,303</td>
<td>.041</td>
</tr>
<tr>
<td>Constitutional Law</td>
<td>4</td>
<td>3,539</td>
<td>2,315</td>
<td>.047</td>
</tr>
</tbody>
</table>

* Most often supported by High Revenue per Equity group of firms

Budget is a strong factor in determining firm Revenue per Partner rank. The Pearson correlation coefficients of participant’s budget and Revenue per Equity Partner scores were calculated to explain the possible relationship between these variables. A
A strong relationship between the budget amount spent per library and the Revenue per Equity Partner of a firm was identified (Table 25).

Table 25

<table>
<thead>
<tr>
<th>Correlation of Revenue per Equity Partner and Library Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RPEP</strong></td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>RPEP</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed)**

Budget per library, calculated as total library budget per firm divided by number of libraries per firm, was significantly related to Revenue per Equity Partner. See Table 26. Results of a regression analysis using budget and Revenue per Equity Partner determined that for every $1 spent in budget per library $1.64 of Revenue per Equity Partner (\(N = 37; F = 19.028; p < .001\)) was generated.
A t-test was performed to examine the difference in means of spend per library in the High vs. Low Revenue per Equity Partner group (Table 27). The 19 firms in the Low Revenue per Equity Partner group reported a mean spend per library of $465,109 while the 18 firms in the High Revenue per Equity Partner group spent an average of $845,150 per library ($N = 37; t = -2.828; p < .01). Average spend per library for all survey participants was $649,994.

The Pearson correlation coefficients of budget per lawyer and Revenue per Equity Partner scores were calculated to explain the possible relationship between
these variables (Table 28). There appeared to be no relationship between Revenue per Equity Partner and library budget per lawyer ($p = .256$). The average spend per lawyer for the Low Revenue per Equity Partner (LRPEP) group was $8,005. It was very similar to and the High Revenue per Equity Partner (HRPEP) group library budget per lawyer of $8,576.

<table>
<thead>
<tr>
<th></th>
<th>LRPEP</th>
<th>HRPEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Mean</td>
<td>$8,006</td>
<td>$8,576</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>2310.102</td>
<td>3525.629</td>
</tr>
<tr>
<td>Std. Error Mean</td>
<td>529.994</td>
<td>855.091</td>
</tr>
</tbody>
</table>

- Web services provided by law libraries: A series of Mann-Whitney $U$ tests were conducted to determine if web services provided by the law library were significantly different between High Revenue per Equity Partner firms and Low Revenue per Equity Partner firms. None were significantly different.

- Types of library collection content: A series of Mann-Whitney $U$ tests were conducted to determine if types of content and access points were significantly different between High Revenue per Equity Partner firms and Low Revenue per Equity Partner firms. Of the 92 possible choices, only four were significant ($p=.05$ or less). Using a 5% significance test, one would have expected 4.8 tests to be significant ($92 \times .05 = 4.8$). This does
not support the assertion that types of content with various access points offered by a law library are significantly different between High Revenue per Equity Partner firms and Low Revenue per Equity Partner firms. Types of content by access point are not a factor in Revenue per Equity Partner rank.

- Law library services with various access modes: A series of Mann-Whitney U tests were conducted to determine if law library services and access points were significantly different between High Revenue per Equity Partner firms and Low Revenue per Equity Partner firms. Only one kind of service accessible in one way was significant (p=.05 or less). Using 5% significance testing, one would have expected 4.5 tests to be significant (90 x .05 = 4.5). This does not support the assertion that kinds of services with various access modes offered by a law library are significantly different between High Revenue per Equity Partner firms and Low Revenue per Equity Partner firms. Types of law library services and how they are accessed is not a factor in Revenue per Equity Partner rank.

- How library holdings are catalogued: A chi-square test was performed on this independent variable to determine the relationship, if any to Revenue per Equity Partner. How holdings are catalogued is not a factor in Revenue per Equity Partner since 89% of respondents chose the same option. There was no relationship to Revenue per Equity Partner.

- Way in which law library staff and their customers communicate: A series of Mann-Whitney U tests were conducted to determine if law library
communication modes were significantly different between Am Law firms in the High Revenue per Equity Partner group and firms in the Low Revenue per Equity Partner group. All respondents selected “email, voicemail, text messages, or phone” so that option was not tested. There was no a statistically significant relationship to Revenue per Equity Partner for any of the remaining options.

- Staff outsourcing: A series of Mann-Whitney U tests were conducted on 10 potential choices to determine if outsourcing were significantly different between High Revenue per Equity Partner firms and Low Revenue per Equity Partner firms. None were statistically significant except the option, “None.” Only 2 out of 45 respondents chose the “None” option (p=.024). A post hoc analysis of the RPEP of the two firms who chose “None” reveals they have a mean Revenue per Equity Partner value double the mean Revenue per Equity Partner value for the remaining firms.

- Downsizing or supporting law libraries: Revenue per Equity Partner was averaged for those who aggressively support the library and those who would downsize the library but maintain the budget, and a between groups independent samples t-test conducted (N = 34; t = .248; p> .1). There was minimal difference in Revenue per Equity Partner between those firms that aggressively supported the library (n = 12, mean = $2,533,000) and those firms reported to have less enthusiastic support for the library (n = 22, mean = $2,420,000). No further analysis was required because support
for the library did not differ significantly (Sig. = .529). Support for the library is not a factor in Revenue per Equity rank.

Law Library Knowledge Management Activities

- Knowledge management strategy: Revenue per Equity Partner was averaged for those Am Law firms with and without a knowledge management strategy and a between groups independent samples t-test conducted ($N = 40; t = .248; p > .1$). What is interesting about this test is that it revealed having a knowledge management strategy was non-significant. This discounts the assertion that a knowledge management strategy is imperative for high Revenue per Equity Partner firms.

- Knowledge management activities: A series of Mann-Whitney $U$ tests were conducted on 66 types of law firm and law library knowledge management activities to determine if any activities were significantly different between High Revenue per Equity Partner firms and Low Revenue per Equity Partner firms. Only one out of the 66 activities was statistically significant. Using 5% significance testing, one would have expected 3.3 tests to be significant ($66 \times .05 = 3.3$). This does not support the assertion that kinds of knowledge management activities services, whether provided by the law library or not, are significantly different between firms with High Revenue per Equity Partner and those with Low Revenue per Equity Partner. Knowledge management initiatives are not a factor in Revenue per Equity rank.
Knowledge management objectives: A chi-square test was performed on the four most frequently mentioned objectives by respondents to determine the relationship to Revenue per Equity Partner. None showed a significant relationship to either the High or Low Revenue per Equity Partner groups of firms.

Summary of Results for Research Questions 2 (Q2) and 3 (Q3)

In answer to Research Question 2 (Q2), “To what extent are law library characteristics a factor in Revenue per Equity Partner rank, a measure of law firm profitability?” six of the 26 independent variables were identified as being a significant factor in Revenue per Equity Partner rank so specific characteristics are linked to law firm profitability in this study (Table 29). The remaining independent variables were non-significant.

In answer to Research Question 3 (Q3) – “To what extent do characteristics of law libraries serving the highest and lowest ranked Am Law 200 firms differ when ranked on the basis of Revenue per Equity Partner?” there were differences in law library characteristics for the High and Low Revenue per Partner Equity groups for five of the six independent variables linked to law firm profitability (Table 29). Results fall into the Law Library Administrator and Staff and Law Library Management categories. A discussion of the differences follows.

A) Law Library Administrator and Staff

- To whom the law library administrator reports: The law library administrator at High Revenue per Equity Partner firms generally report higher up the law firm organization -- to the CIO. The library administrator
at Low Revenue per Equity Partner firms most often to report to the managing partner. This difference in Revenue per Equity Partner is $1,048,663 or a 50% higher Revenue per Equity per partner for firms in the High Revenue per Partner group.

- **Number of library staff per library:** High Revenue per Equity Partner law firm libraries have fewer employees, an average of two per library. Each library employee accounts for $295,000 of Revenue per Equity Partner. This variable alone accounts for 24% of the Revenue per Equity Partner variance.

- **Staff professional development:** High Revenue per Equity Partner law firms (10 out of 22) are more likely to offer library staff tuition reimbursement to obtain a university degree than Low Revenue per Equity Partner firms. This difference in Revenue per Equity Partner is $1,310,697 or a 62% higher Revenue per Equity per partner for firms in the High Revenue per Partner group who offer this professional development option than firms who do not.

- **Firm practice areas supported by the library:** Though 11 practice areas tested significant to Revenue per Equity Partner ranking, the two showing the greatest difference in Revenue per Equity Partner between the High and Low Revenue per Equity Partner groups are business law and white collar crime. Over 50% of the libraries in the High Revenue per Equity Partner supported business law, accounting for a difference in Revenue per Equity Partner of $807,000 or a 40% higher Revenue per Equity
Partner. For those firms supporting the white-collar crime practice, this difference in Revenue per Equity Partner is $1,015,000 or a 51% higher High Revenue per Equity Partner firms than for Low Revenue per Equity Partner firms.

- **Library budget:** In High Revenue per Equity Partner firms, $1.00 of library budget generates $1.64 of Revenue per Equity Partner. Firms in the High Revenue per Equity Partner group have 82% more Revenue per Equity Partner ($380,041) more than firms in the Low Revenue per Equity Partner group.

- **Bill rate for library staff time:** High Revenue per Equity Partner firms bill library staff time more often at higher rates than Low Revenue per Equity Partner firms. All Am Law firms have hourly bill rates for library staff ranging from $100 - $200. Higher ranked firms are more likely to use the $201+ hourly bill rate for library employee services. This difference accounts for $1,160,000 or 56% more Revenue per Equity Partner for the High Revenue per Equity group than the low Revenue per Equity Partner Am Law firms who do not use the higher billing rate.
**Table 29**  

*Characteristics of Am Law Libraries Significantly Affecting Revenue per Equity Partner and Rank*

<table>
<thead>
<tr>
<th>Significant Differences in Revenue Per Equity Partner</th>
<th>HRPEP Firms</th>
<th>LRPEP Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>To whom the library Administrator reports</td>
<td>CIO = $3,125,937</td>
<td>COO = $2,077,274</td>
</tr>
<tr>
<td>Number of Library staff per library – Regression @ $295,000 of RPEP per Library FTE &amp; accounts for 24% of the variance</td>
<td>$3,410,296</td>
<td>$1,409,245</td>
</tr>
<tr>
<td>Library budget per library $1.00 of library budget generates $1.64 of Revenue per Equity Partner.</td>
<td>$845,150</td>
<td>$465,109</td>
</tr>
<tr>
<td>Support for Professional Development</td>
<td>$3,410,852</td>
<td>$2,100,155</td>
</tr>
<tr>
<td>Range in hourly bill rate for library staff time</td>
<td>$3,217,000 when use &gt;$200</td>
<td>$2,057,000 - less likely to bill @ &gt;$200</td>
</tr>
<tr>
<td>Practice areas most often supported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Business Law</td>
<td>$2,831,000</td>
<td>$2,024,000</td>
</tr>
<tr>
<td>-- White Collar Crime</td>
<td>$3,002,000</td>
<td>$1,987,000</td>
</tr>
</tbody>
</table>

The impact to Revenue per Equity Partner by the remaining independent variables independent variables used in this study, when analyzed according to High and Low Revenue per Equity Partner groups, were non significant. These variables do represent characteristics of law libraries serving highly profitable private law firms (the Am Law 200) but they are not unique characteristics of the highest ranked Am Law 200 firms according to the Revenue per Equity Partner ranking.
Summary of Results for Research Question 4 (Q4)

After reviewing the statistical analysis results (see pg. 118), Research Question (Q4) – “To what extent are private law firm profitability and law library participation in firm knowledge management activities related?” can be answered. All of the data collected to answer this question was non-significant to Revenue per Equity Partner rank. There is no link between private law firm profitability and law library participation in knowledge management activities. This discounts the assertion that a knowledge management strategy is imperative for highly profitable private law firms. The opposite was found to be true. Firms without a knowledge management strategy have higher Revenue per Partner ranking than those with a knowledge management strategy. These unexpected results cannot be explained.

Hypotheses Testing

With all summarization completed, the study’s hypotheses were ready to be tested. The remainder of this chapter explains the outcome of each test based on research findings.

One major and two minor hypotheses were proposed for this study.

Major Hypothesis

There is no significant difference in the characteristics of law libraries serving the highest ranked private law firms and characteristics of law libraries serving the lowest ranked private law firms in the 200 highest grossing private law firms in the United States, the Am Law 200, where rank is based on a financial measure of relative profitability.
This hypothesis was rejected. Statistical analysis show firms in the Higher Revenue per Equity group are different in reporting structure, number of employees per library, investments in professional development, bill a higher rate for library staff hours, and the libraries support different practice areas. The impact to Revenue per Equity partner equates to High Revenue per Equity Partner group RPEP of $3,377,410 vs. Low Revenue per Equity Partner group RPEP of $1,541,866, a 119% difference ($1,835,544) in RPEP.

Minor Hypotheses

1) There is no difference in characteristics of law libraries serving the Am Law 200 and other private law firm libraries.

This hypothesis was rejected. A descriptive analysis examined 21 independent variables to test this hypothesis. Seventeen of the independent variables were different. Most of the differences were driven by budget. Am Law libraries report in at a higher level within the firm which could account for their budgets averaging 151% higher than other private law firm libraries. Other budget related differences include: twice the libraries, 40% more staff firm wide, 33% more professionals on staff and a lower ratio of support and technology staff to professionals (1.68 vs. 2.8:1). Average number of lawyers per firm is 85% higher.

2) There is no significant difference in participation in law firm knowledge management activities by law libraries serving the highest ranked private law firms and law libraries serving the lowest ranked private law firms in the Am Law 200 according to Revenue per Equity Partner (RPEP).
This hypothesis was true so we accept the hypothesis. Knowledge management strategy, knowledge management objectives, and knowledge management activities by the law library were non-significant. There is no link between private law firm profitability and law library participation in knowledge management activities according to this study.

Summary

This chapter provided details about the research results. A combination of descriptive, quantitative, and correlational approaches provided relevant analysis. The benchmarking survey gathered the data to identify characteristics of law libraries serving the 200 highest grossing private law firms in the United States that confirmed they were different from the average law library. Furthermore, differences in law library characteristics of law libraries ranked highest and lowest according to Revenue per Equity Partner did surface though not always where expected. Research Question 1 (RQ1) confirmed the Am Law 200 libraries were different from other private law firm libraries. Research Questions 2 (RQ2) and 3 (RQ3) revealed which of the independent variables were statistically significant to law firm profitability and whether there was a difference in those variables according to High and Low Revenue per Partner groupings within the Am Law 200. Research Question 4 (RQ4) unexpectedly discounted the assertion that knowledge management was critical to highly profitable private law firms. The major hypothesis and minor hypothesis one were proven false and rejected. Minor hypothesis two was true and failed to be rejected.

The response rate was sufficient to deliver an understanding of law library operations in this rarefied atmosphere (.42% of all private law firms in the United States)
Despite having to discard almost 10% of the responses due to missing data. Since no theory exits about libraries and their sponsoring organization’s profitability, an unusually large amount of data were collected to facilitate development of emerging theory (493 data points). This provides a richer base for the summary and discussion of major findings, conclusions, implications, and future directions in the next chapter.
CHAPTER 5
SUMMARY AND CONCLUSIONS

Introduction

In this chapter major findings from the research results in Chapter 4 are presented, contributions and limitations of the study are discussed, and implications for future research are considered. The chapter begins with a summary of the research design and methodology, objectives, research questions, and hypotheses to provide context for the discussion of major findings, conclusions, and implications for future research.

The purpose of this study was to develop evidence of a relationship between characteristics of law libraries and private law firm profitability for law library administrators to use when making strategic decisions that influence the value of their libraries. Law libraries have been extensively studied to establish industry benchmarks for selected characteristics of all types of law libraries. This study was the first to utilize financial rank to determine which law library characteristics would have the biggest impact on private law firm profitability. Rankings have been successfully used to identify differences between characteristics of libraries serving higher ranked organizations and lower ranked organizations (Pagell & Lusk, 2002; Jones, 2007).

Subject Industry and Sample Population

Sixty percent of the current United States workforce is composed of knowledge workers. The legal industry was selected as the subject for the study because it is composed principally of knowledge workers whose primary professional function is
gathering and using information or knowledge. Financial and other details of the Am Law 200, the 200 highest grossing private law firms headquartered in the United States, have been compiled annually since 1984 by Incisive Media, Inc. The Am Law 200 represents the top .42% of the 47,500 private law firms in the United States ranked according to the financial measure of gross revenue.

The 2008 Am Law 200 was the study’s available population. Adjustments to the 2008 list of Am Law 200 private law firms were made to account for dissolutions or mergers. Law firms were excluded where no contact information could be found for any library staff person. The sample population for the study totaled 179. Survey recipients were identified using the American Association of Law Libraries and Special Libraries Association – legal division directories. The American Association of Law Libraries was founded in 1906 and is the premier professional association for law librarians in the United States. The Special Libraries Association was founded in 1909. The legal division was established in 1993 for all special librarians whose primary interest is law librarianship. Special libraries generally serve corporations or medical or legal institutions, but can be any library not otherwise considered a school library (K-12), academic library (college or university setting), or public library.

Theoretical Framework of the Study

Productivity serves as the theoretical construct for this study. It is important to this study because high productivity is associated with competitive advantage which can ensure an organization’s viability and sustainable market share (Stewart, 1997). An organization could expect to positively impact its productivity and resulting profitability by identifying and effectively managing contributors to its productivity. A link between
information and organizational productivity and between organizational productivity and
the existence of a library has been established through research across disciplines as
diverse as economics, the social sciences, engineering, and library and information
science (Koenig, 2000).

Outcomes benchmarking, the comparison of data across institutions, served as
the theoretical framework for the design of this research. Typically a qualitative
approach precedes a quantitative study to gather a wide range of descriptive non-
parametric data to generate ideas for further research or to formulate theory. Since
there is no theory about the relationship of library characteristics and a sponsoring
organization’s profitability, both approaches to the research design were necessary to
establish data from which emerging theory might be developed.

Law Library Research

All types of law libraries have been surveyed multiple times by market research
and consulting firms and professional associations to track established industry-wide
benchmarks for various law library characteristics. Some studies have been repeated
at regular intervals over a period of years. This body of research has two distinguishing
features. First, these benchmarking survey results are generally segmented on the
basis of law library type (government, private, and academic), budget, or number of
lawyers limiting their usability. Secondly, almost no statistical analysis is included in the
published survey results. Despite these limitations, law library administrators use these
survey results as benchmarks to support strategic decision-making in the management
of their libraries.
Study Objectives, Research Questions, and Hypotheses

There were three objectives for the study. The first objective was to determine if libraries serving highly profitable private law firms, the Am Law 200, were different from other law libraries, and secondly, which of those differences were most likely to affect law firm profitability. A third objective was to determine the extent to which law libraries serving firms ranked in the Am Law 200 were participating in law firm knowledge management activities.

This study was guided by four research questions and three hypotheses. The four research questions were constructed to understand the relationships between characteristics of libraries serving Am Law 200 firms and characteristics of other private law libraries.

Research Question 1 (Q1) -- To what extent do characteristics of law libraries serving the 200 highest grossing private law firms headquartered in the United States (Am Law 200) and private firm law library industry benchmarks for these characteristics differ?

Research Question 2 (Q2) -- To what extent are law library characteristics a factor in Revenue per Equity Partner rank, a measure of law firm profitability?

Research Question 3 (Q3) – To what extent do characteristics of law libraries serving the highest and lowest ranked Am Law 200 firms differ when ranked on the basis of Revenue per Equity Partner?

Research Question (Q4) – To what extent are private law firm profitability and law library participation in firm knowledge management activities related?

Three hypotheses influenced the study design, one major, and two minor.
Major Hypothesis: There is no significant difference in the characteristics of law libraries serving the highest ranked private law firms and characteristics of law libraries serving the lowest ranked private law firms in the 200 highest grossing private law firms in the United States, the Am Law 200, where rank is based on a financial measure of relative profitability.

Minor Hypothesis 1: There is no significant difference in characteristics of law libraries serving the Am Law 200 and other private law firm libraries.

Minor Hypothesis 2: There is no significant difference in participation in law firm knowledge management activities by law libraries serving the highest ranked private law firms and law libraries serving the lowest ranked private law firms in the Am Law 200 according to Revenue per Equity Partner.

Methodology

This study used a benchmarking survey to collect data to identify differences in law library characteristics between Am Law libraries and other private law libraries. Data was also gathered to identify differences in characteristics of libraries serving highest and lowest ranked Am Law firms where rank was based on a financial measure of profitability. That data was then used to determine if there was relationship between characteristics of Am Law libraries and law firm profitability.

Survey questions were developed by analyzing prior law library research findings that described benchmarks for various library characteristics. Twenty-six law library characteristics were selected to serve as the independent variables for the study. Revenue per Equity Partner, the best predictor of law firm profitability (Gibson, 2002)
was chosen as the one dependent variable. Law library research studies from which the survey instrument was derived were:

- Law Library Benchmarks –2008/09 - Primary Research Group
- 2006 Private Law Library/Corporate Law Library SIG Operational Survey - Canadian Law Library Association
- Global Law Firm Knowledge Management Survey, 2006 - Curve Consulting

The web-based survey and statistical tool, Survey Monkey, was used to administer an online benchmarking survey to collect data. The survey instrument was tested for validity in a pilot study of the 10 largest law firms listed on the 2009 Texas 100. These law firms were not listed on the Am Law 200. Five questions were deleted and two questions were edited based on participant feedback from the pilot study.

**Survey Response Rate**

Sixty-one surveys were attempted by survey participants for a response rate of 35%. Ten surveys were discarded because less than 4 of the 25 questions were answered. The adjusted return rate was 28.5% (n = 51). Though this response rate was less than the 50% ideal return rate, the respondents were considered representative of the survey population sample. When participants were ranked according to Revenue per Equity Partner, they were about evenly divided. Twenty-four firms (47%) fell into the High Revenue per Equity Partner segment and 27 (53%) firms fell into the Low Revenue per Equity Partner segment.
Data Analysis

Statistical analysis tests used were dependent on whether the data were parametric (ratio or interval) or non-parametric (ordinal or nominal). The independent t-test, linear regression, and one-way analysis of variance (ANOVA) were used to test the means of parametric data (interval or ratio) for significance among the dependent variable, Revenue per Equity Partner, and the independent variables, law library characteristics. Mann-Whitney U, Pearson correlation, and chi-square were used if the data were non-parametric (nominal or ordinal). The means of each independent variable was compared to the means of the dependent variable first to determine significance. No further testing was done on those independent variables testing non-significant. When an independent variable was significant, further testing within and between the means of the High Revenue per Equity Partner and Low Revenue per Partner was conducted. This testing established the degree to which that independent variable influenced Revenue per Equity Partner and rank. Placement of a law firm into the high or low ranked Revenue per Equity Partner group was based on a firm’s mean Revenue per Equity Partner compared to the mean Revenue per Equity Partner ($2,400,000) for all survey participants.

Major Findings

The major findings for Research Question 1 (Q1) - “To what extent do characteristics of law libraries serving the 200 highest grossing private law firms headquartered in the United States (Am Law 200) and private firm law library industry benchmarks for these characteristics differ?” reveal Am Law 200 law libraries are decidedly different from other private law firm libraries. Four of the twenty-one
characteristics studied between the two groups were similar. Three converge around the work place. They are; low lawyer to staff ratio, professional development in the form of payment for college or university degrees, and extensive work experience. This indicates law firms likely apply the same staffing principles to their law libraries as to the legal services staff. Law libraries must have highly experienced, well-trained library staff who can deliver high levels of service to lawyers when needed. The fourth similar characteristic, consistency in the hourly billing rate for library staff time across all private law firms, would indicate rates have been commoditized and are not considered a competitive advantage.

Most of the differences in characteristics appear to be driven by budget. One characteristic could play a larger role in budget and other related characteristics. Am Law libraries report to a higher organizational level within their firm, the chief operations officer. The industry standard for private law libraries is to report to a library committee or managing partner. The most profitable Am Law libraries (High Revenue per Equity group) report to the chief information officer. Direct access to senior firm management does not guarantee an Am Law library more resources. It does imply an Am Law library administrator has fewer organizational levels to navigate to obtain resources. Direct access offers the Am Law library administrator the additional advantage of being able to build a relationship with senior decision makers. The law firm business model is based on relationships and negotiation.

This reporting structure could be a contributing factor to Am Law libraries’ higher budgets (151% higher) which translates to double the library locations, 40% more library staff firm wide, and 33 % more librarians than other private law firm libraries. The
The larger investment in library staff and number of libraries by Am Law firms gives lawyers access to information services expertise when and where needed. The library can do more work, in a shorter timeframe. Improving productivity of lawyers directly impacts firm profits. Larger staff to do more work could also account for why Am Law libraries spend 14% less per attorney than other private law firm libraries.

Findings for research questions two and three are grouped together because the same independent variables (or a subset) were used to answer the two questions. Major findings for Research Question 2 (Q2) – “To what extent are law library characteristics a factor in Revenue per Equity Partner rank, a measure of law firm relative profitability?” and Research Question 3 (Q3) – “To what extent do characteristics of law libraries serving the highest and lowest ranked Am La 200 firms differ when ranked on the basis of Revenue per Equity Partner”? reveal specific characteristics are linked to law firm profitability. Six of the independent variables were
identified as being a significant factor in Revenue per Equity Partner and rank. The remaining 20 independent variables, though characteristics of libraries serving highly profitable private law firms (Am Law 200), are not a factor in Revenue per Equity Partner and rank. The six characteristics and the difference in Revenue per Equity Partner between the Am law firms ranked the highest and lowest are:

- To whom the library administrator reports - $1,048,663 (50% higher)
- Number of library staff per library - $2,001,051 (142% higher)
- Budget per library - $380,041 (82% higher)
- Support for Professional Development - $1,310,697 (62% higher)
- Range in library staff hourly bill rate - $1,160,000 (56% higher)
- Practice areas supported
  - Business law - $807,000 (40% higher)
  - White collar crime - $1,015,000 (51% higher)

Study results indicate the optimum reporting structure for the law library administrator is to report to the chief information officer (CIO). Reporting structure tested marginally significant so there is support for it as a factor in Revenue per Partner and rank. Of the top two choices on this survey, Revenue per Equity Partner for a firm in which the law library administrator reports to the chief information officer (CIO) is $1,043,000 or 50% higher than if the administrator reports to the chief operating officer (COO). Since technology is such an essential tool in delivering information and information services in any library setting, the association between the library and the technology department is logical. Other implications from having the senior law library administrator report to the highest level of the organization include:
• The most profitable firms recognize the strategic importance of and the need to invest in information services.

• The most profitable firms accord the same status/credibility to law library administrators as other senior firm administrators.

Another unexpected result was that support for the Am Law library is not a factor in Revenue per Equity Partner rank when testing to determine differences in those who would downsize the library vs. those who aggressively support the library. This finding could be attributed to the Am Law library’s close alignment with senior management due to the reporting structure, another significant factor in high Revenue per Equity Partner.

There were significant results related to budget. A new cost benefit ratio specific to law libraries was established by the study; every $1 spent in budget per library generated $1.64 of Revenue per Equity Partner. A related finding that also strongly supports a positive impact by the library on law firm profitability is that each library employee accounts for $295,000 of Revenue per Equity Partner. This fact alone accounts for 24% of the variance in Revenue per Equity Partner.

The presence of technology staff in an Am Law firm library is a significant factor in Revenue per Equity Partner and rank. Am Law firms that hire technical staff in the library have a 36% higher Revenue per Equity Partner than those that do not have technical staff assigned to the library. With technical staff comes an ability to use new technologies to deliver information enabling the library to help the firm maintain its competitive advantage. In the 2009 survey, Legal Professionals’ Information Use Habits, Preferences, and Satisfaction, (Curle, 2009), just 25% of law firm lawyers reported not using some kind of handheld device.
Reimbursement of tuition for staff to obtain a university degree was the only professional development option that tested as a significant factor in Revenue per Equity Partner. Revenue per Equity Partner of Am Law firms that offer library staff this option have 62% more Revenue per Equity Partner than the lower ranked firms that do not offer this professional development option. The legal practitioner field employs highly educated individuals and requires continuing education monitored by state bar associations. It is part of the culture of law firms to provide educational assistance. A more educated workforce equates to better and more complex services which can generate higher revenue and facilitate productivity. This finding supports the law librarianship model in which law librarians have always aligned themselves with the legal field rather than the library and information science field (Brock, 1974). It is not surprising firms are willing to support library staff who seek educational credentials.

Firm areas of practice supported by the library are significantly different between High Revenue per Equity Partner and Low Revenue per Equity Partner firms so are a factor in Revenue per Equity Partner rank. This indicates the Am Law library administrator understands the importance of following the law firm’s lead in concentrating on the most productive areas of practice to maintain profitably (DiPietro, 2008). Revenue per Equity Partner for law firms supporting the high performing practices ranged between 40-50% higher than revenue per Equity Partner of firms who do not.

Law firm knowledge management strategy, knowledge management objectives, and the law library contribution to firm knowledge management initiatives were non-significant. Knowledge management was clearly not a factor of Revenue per Equity
rank. This was unexpected, but the fact that law firms tend to use knowledge management in the practice of law rather than for business management purposes could account for this finding.

Participation by private law firms in knowledge management by Am Law libraries had been declining (Am Law Library Survey, 2008) but rose in 2009. Seventy-nine percent of libraries reported they participated in knowledge management activities, an increase of 4%. Significant barriers to knowledge management in a knowledge intensive industry such as the legal profession remain. For example, the time-based billable hourly fee model discourages sharing tacit knowledge among attorneys though contributions are included in evaluating performance (Rusanow, 2006).

Hypothesis Testing

With all summarization completed, the study’s hypotheses were ready to be tested. The remainder of this chapter explains the outcome of each test and summarizes study findings.

One major and two minor hypotheses were proposed for this study.

Major Hypothesis

There is no significant difference in the characteristics of law libraries serving the highest ranked private law firms and characteristics of law libraries serving the lowest ranked private law firms in the 200 highest grossing private law firms in the United States, the Am Law 200, where rank is based on a financial measure of relative profitability.

This hypothesis was rejected. Statistical analysis shows firms in the High Revenue per Equity group are different in reporting structure, number of employees per
library, investments in professional development, bill a higher rate for library staff hours, and the libraries support the most profitable practice areas. The impact to Revenue per Equity partner equates to High Revenue per Equity Partner group of $3,377,410 vs. Low Revenue per Equity Partner group of $1,541,866, a difference of $1,835,544 or 119%.

Minor hypotheses

1) There is no difference in characteristics of law libraries serving the Am Law 200 and other private law firm libraries.

This hypothesis was rejected. A descriptive analysis examined 21 independent variables to prove this hypothesis. Seventeen of the independent variables were different. Most of the differences were driven by budget. Am Law libraries report to a higher-level administrator within the firm which could account for their budgets averaging 151% higher than other private law firm libraries. Other Am Law library budget related differences include: twice the libraries, 40% more staff firm wide, 33% more professionals on staff, and a lower ratio of support and technology staff to professionals (1.68 vs. 2.8:1).

2) There is no significant difference in participation in law firm knowledge management activities by law libraries serving the highest ranked private law firms and law libraries serving the lowest ranked private law firms in the Am Law 200 according to Revenue per Equity Partner (RPEP).

This hypothesis was true and must be accepted. Law firm knowledge management strategy, knowledge management objectives, and knowledge management activities by the law library were non-significant. There is no link between
private law firm profitability and law library participation in knowledge management activities according to this study.

Contributions of the Study

This study represents the first attempt to establish a link between a private law firm’s profitability as measured by Revenue per Equity Partner and its law library’s characteristics. Since multiple disciplines influenced the course of this study, this research contributes to the literature of several disciplines: law firm management, law libraries and law librarianship, library and information science, knowledge management, business management – benchmarking, economics – valuing intangibles. Specific contributions to the literature include validation of benchmarking as a viable theoretical framework for investigating library valuation, of productivity as a theoretical framework for determining library profitability, of the use of rank to associate library characteristics with relative profitability, and of the use of both qualitative and quantitative approaches to research design when little or no theory exists for the topic being investigated. The most significant contributions of this study are development of important law library financial and return on investment benchmarks and a listing of characteristics that have been empirically shown to impact law firm productivity.

This study contributes to law library management education by identifying library characteristics of law libraries at highly profitable law firms that impact law firm profitability. The characteristics are: to whom the law library administrator reports, number of library staff per library, library budget per library, support for professional development – tuition reimbursement for a degree, range in hourly bill rate for library staff time, practice areas most often supported by library, especially business law and
white-collar crime. Library school faculty will be able to add these findings to their curriculum. Faculty and students in law librarianship programs will gain a greater understanding of how to organize and manage law libraries and collections to maximize library value to their firms.

Benefits to library and information science research includes validation of the research design and benchmarking as a theoretical framework for conducting research into ways libraries can deliver value and return on investment to their sponsors. A proven research design approach incorporating benchmarking as the theoretical framework can be generalized and replicated in future studies. It demonstrates how rank can be used to operationalize relative measures for research purposes.

For practitioners, specific study findings provide law library administrators with some important financial benchmarks: return of investment on library budget – 1:1.68 and bottom-line contributions - each library staff generates $235,000 in Revenue per Equity Partner. It also identifies the most beneficial reporting structure for the law library administrator. Equally important is determining that knowledge management did not positively impact their firm’s profitability. The study validates the value of targeting the most profitable areas of practice as primary library customers and identifies some areas on which to concentrate. Lastly, the importance and ramifications of having technology staff in the library are confirmed. The presence of technology staff facilitates the library’s adoption of the new technology to deliver information and information services to customers. Technology staff also enables the library to expand their scope of services outside the traditional library setting to be an active participant in the law firm’s presence on both the Internet and intranet websites. These activities demonstrate a law
library’s ability to support their firm’s move into new technologies and increase the library’s value to the firm.

Limitations of the Study

This study targeted a single, knowledge intensive industry, the legal profession. Data used in the study for both private law libraries and libraries serving those firms were self-reported. Financial data was publically available for only the 200 highest grossing private law firms or .42% of the 47,500 private law firms headquartered in the United States.

This study combined qualitative and quantitative research design and examined a large body of primarily non-parametric data. While quantitative research design and parametric data is generally considered more rigorous, this combined approach was necessary to validate that Am Law libraries’ were different from other private law firm libraries and therefore suitable for a study where differences based on law firm profitability were investigated.

The survey response rate was somewhat low at 28.5% but results were considered valid because of the high degree of similarity between associated population rank and survey response population rank. Also survey sample dependent variables were representative of variables used in other law library research.

Future Research

Theoretical Implications

This purpose of this study was to develop detailed evidence of a relationship between law libraries and private law firm profitability for law library administrators to use when making strategic decisions that influence the value of their libraries. The kind
of evidence sought was characteristics of libraries serving the top grossing private law firms related to firm rank, a financial measure of profitability. This research provides researchers and practitioners the ability to view empirically the link between library characteristics and private law firm profitability.

Productivity as a theoretical construct for determining value is a well-established business management practice. Its use in this study has validated productivity as a useful measure for establishing library value. While there is no theory based on the impact of information services, number of information professionals, strong collections or other library characteristics on law firm profitability, results from multiple repetitions of this study could become the basis of new theory about this phenomenon. It is recommended that this study be replicated in highly profitable organizations in other industries using the same methodology. Further research may find characteristics linked to profitability vary by industry. Alternatively some characteristics may emerge as standard across all industries.

The success of benchmarking as the theoretical framework for the study’s research design has validated its usefulness as a research tool for library and information science research particularly in the study of library characteristics that have intangible value. It is recommended that benchmarking be included in library school research methods and management classes and taught as a tool for conducting library and information science research.

Using study findings as a foundation, a model to operationalize the value proposition for libraries might be developed. If further study shows similarities and/or differences among libraries by industry, multiple models of libraries serving high
performing organizations could be established to aid library administrators in customizing operations by industry or type of organization (for-profit or non-profit). Empirical evidence would provide a compelling basis for strategic decision-making by library administrators in formulating a library’s value proposition for their sponsor.

Development of a theory about the link between a library’s characteristics and a sponsor’s profitability would be a highly desirable addition to the body of research on library and information services productivity and value.

Methodological Implications

This study combined qualitative (descriptive) and quantitative (relational) approaches to answer the research questions (RQ) and test hypotheses about characteristics of libraries serving highly profitable private law firms and the link between law firm profitability and the law library. The research design provides any kind of library serving for-profit organizations the means to link library characteristics to organizational profitability and productivity. The success of this approach supports its use in library and information science research. This methodology should be included in library school research methods and library management classes.

This method should be replicated in other types of law libraries such as academic law school libraries, and government libraries though they are non-profit organizations. A different measure of success such as academic ranking could be used. The methodology can be replicated to study libraries in other types of non-profit industries. Rank could be based on measures of success appropriate to that industry, e.g., donations or endowments, number of visitors, or membership.
Practical Implications

Prior research has established a link between information and organizational productivity and libraries. Results from this study clearly establish a link between certain law library characteristics and profitability. A profile of libraries serving highly profitable private law firms now exists. More importantly, the most significant factors in determining profitability have been identified. Two important financial benchmarks have been developed from this study: a cost benefit ratio of law libraries and the value of a law library employee in terms of a financial measure of profitability. Study results show which law library characteristics are not factors in law firm productivity and profitability. The optimum reporting structure for a law firm library has been established.

It is recommended that a more detailed examination of characteristics related to law firm profitability indentified in this study be undertaken. Examples of characteristics suitable for further study are practice areas most supported, and to whom the law library manager reports. The next audience to be surveyed should be to whom the law library manager reports, the chief information officer, chief operations officer, managing partner, practice manager, executive director, or library partner, to identify law firm practice management’s preferred measures and methods for determining and communicating library value. Law library administrators and library users (attorneys, para-legals, and law clerks) should be surveyed to learn their opinion of this study’s findings. The degree of influence of the person to whom the law library administrator reports on library characteristics such as budget, number of libraries, number and type of staff is another area suitable for further research. This study identified the chief
information officer (CIO) as the person to whom law library administrators at the very highest ranked private law firms (most profitable) most often reported. Since this study revealed that support for the law library across the firm was not significant to firm profitability, it follows that the person to whom the law library administrator reports would impact certain law library characteristics. This relationship could have a key influence on law library value. A final recommendation for future research would be to conduct the same study on the same population.

This research provides the evidence needed to support strategic decision making in the administration of private law firm libraries. Findings deliver research-based benchmarks that can be used in negotiations for resources and support from senior management. Results also suggest the best position to which the law library administrator should report within the firm practice management. Conducting further research into identifying library characteristics and their link to profitability or some other measure of success for non-profits provides needed resources for practitioners and library and information science students to use in establishing a profile of best practices.

Summary

It has never been more important for a library to prove value, a return on investment, to its sponsor. Law library administrators must make strategic decisions for their libraries that produce value but have little empirical evidence as to what produces the greatest productivity gains for their firms. Demonstrating the value of the library to the law firm’s bottom line positively impacts a law library administrator’s ability to successfully negotiate for library resources.
Numerous studies of law libraries have established law library industry benchmarks for various library characteristics. This study looked at selected characteristics of law libraries serving the 200 highest grossing private law firms headquartered in the United States as indicators of a law library’s contribution to its firm’s profitability/productivity. While there is no theory about the link between libraries and their sponsor’s profitability, this study establishes a link exists. It is hoped that law library administrators can use these findings to prove and increase law library contribution to a firm’s bottom line.
APPENDIX A

IRB APPROVAL LETTER
February 10, 2009

Dr. Yvonne Chandler  
Department of Library & Information Sciences  
University of North Texas

RE: Human Subjects Application No. 10-002

Dear Dr. Chandler:

In accordance with 45 CFR Part 46 Section 46.101, your study titled “Benchmarking Characteristics of Libraries Serving Highly Profitable Private Law Firms: Strategic Implications for Value and Productivity” has been determined to qualify for an exemption from further review by the UNT Institutional Review Board (IRB).

No changes may be made to your study’s procedures or forms without prior written approval from the UNT IRB. Please contact Jordan Smith, Research Compliance Analyst, ext. 3940, if you wish to make any such changes. Any changes to your procedures or forms after 3 years will require completion of a new IRB application.

We wish you success with your study.

Sincerely,

[Signature]

Patricia L. Kaminski, Ph.D.  
Associate Professor  
Chair, Institutional Review Board

PK:js
APPENDIX B

INVITATION TO PARTICIPATE IN PILOT STUDY
Sent from Survey Monkey site January 5, 2010:

To: [Email]

From: margaret.carroll@unt.edu

Subject: Pilot Survey - Law Library Benchmarking Study

Body: Your assistance is needed! Below is a link to a survey to satisfy partial requirements of the Interdisciplinary PhD in Information Science form the College of Information-University of North Texas. Dr. Yvonne Chandler, Dissertation Committee Chair, can verify this project. She can be reached at 940-565-3666 or via email to yvonne.chandler@unt.edu.

This research is significant because it will be the first to validate a relationship between law libraries and a private law firms’ financial success (productivity). As you know, industry benchmarks for typical private law firm library characteristics have been established in multiple studies conducted over several years. But no research has identified characteristics of law libraries serving only the highest grossing, most profitable private law firms in the United States.

Launch the survey to learn more about how you can help with this project. It will only take about 20 minutes of your time.

Here is a link to the survey:
https://www.surveymonkey.com/s/aspx

This link is uniquely tied to this survey and your email address. Please do not forward this message.

Thanks for your participation! Your response is greatly appreciated.

Please note: if you do not wish to receive further emails from us, please click the link below, and you will be automatically removed from our mailing list.

Margaret Aby Carroll
Doctoral Teaching Fellow
University of North TX
APPENDIX C

PILOT SURVEY INSTRUMENT
APPENDIX A - SURVEY QUESTIONNAIRE-Pilot
INTRODUCTION

My name is Margaret Aby Carroll and I am a candidate in the Interdisciplinary Ph.D. Program in Information Science at the University of North Texas – College of Information – Dept. of Library and Information Science.

You are one of ten Texas private law firm libraries chosen to participate in a pilot for a proposed survey that will identify and evaluate characteristics of law libraries serving highly successful law firms – the Am Law 200. The study will also determine which law library characteristics are most likely to impact firm financial success using three productivity rankings common to the legal community – Gross Revenue, Revenue per Lawyer, and Profits per Equity Partner.

Firms participating in this pilot study will be known only to this researcher. Survey results will be used to model the final version of the survey and not published in any manner. If you complete this survey you are implying consent for the information to be used in the described form. You are free to withdraw your consent and cease participation at any time.

If you have any questions email them to me at margaret.carroll@unt.edu or call me at 817-797-3919. You can also ask questions of my dissertation committee chair, Dr. Yvonne Chandler, Associate Professor, University of North Texas, College of Information, Dept. of Library and Information Science – 940-565-3777.

The significance of this study is that it provides empirical research about which law library characteristics are associated with an individual private law firm’s financial success. Results can be used to justify budgets; support decision making about services, staff, and the allocation of resources; to formulate useful methods for reporting library value to the firm’s senior management.

Please take the approximately 20 minutes needed to complete this survey. You can start then stop and return to that same place in the survey if necessary. Responses should be composite answers for ALL of the Firm’s Libraries or Information Centers at ALL Firm locations. It is important that your firm’s aggregate data be submitted if the overall survey results are to be considered valid.

If you cannot answer the questions in this survey, please forward this request to someone in the firm who can. Completing the survey within the first week of its receipt will greatly facilitate this project. Thank you in advance for your participation.

Sincerely,

Margaret Aby Carroll
University of North Texas
College of Information
Dept. of Library & Information Studies
margaret.carroll@unt.edu
817-797-3919 – cell phone
940-565-2445 – school office
=====================================================
General Information
PART A: About the Law Firm

1 -- In what areas of the law do your firm’s attorneys practice? Please check all practice areas that apply for all locations.

<table>
<thead>
<tr>
<th>Practice Areas</th>
<th>Practice Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Law</td>
<td>Immigration</td>
</tr>
<tr>
<td>Admiralty &amp; Maritime Law</td>
<td>Indians &amp; Native Populations</td>
</tr>
<tr>
<td>Agricultural Law</td>
<td>Insurance</td>
</tr>
<tr>
<td>Alternative Dispute Resolution</td>
<td>Intellectual Property</td>
</tr>
<tr>
<td>Antitrust &amp; Trade Regulation</td>
<td>International Law</td>
</tr>
<tr>
<td>Appellate Practice</td>
<td>International Trade</td>
</tr>
<tr>
<td>Aviation and Aerospace</td>
<td>Internet Law</td>
</tr>
<tr>
<td>Banking Law</td>
<td>Investments</td>
</tr>
<tr>
<td>Bankruptcy</td>
<td>Labor and Employment</td>
</tr>
<tr>
<td>Business Law</td>
<td>Legal Malpractice</td>
</tr>
<tr>
<td>Civil Rights</td>
<td>Litigation</td>
</tr>
<tr>
<td>Class Actions</td>
<td>Media Law</td>
</tr>
<tr>
<td>Commercial Law</td>
<td>Medical Malpractice</td>
</tr>
<tr>
<td>Communications Law</td>
<td>Mergers and Acquisitions</td>
</tr>
<tr>
<td>Constitutional Law</td>
<td>Military Law</td>
</tr>
<tr>
<td>Construction Law</td>
<td>Natural Resources</td>
</tr>
<tr>
<td>Contracts</td>
<td>Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>Corporate Law</td>
<td>Personal Injury</td>
</tr>
<tr>
<td>Criminal Law</td>
<td>Products Liability</td>
</tr>
<tr>
<td>Debtor and Creditor</td>
<td>Professional Liability</td>
</tr>
<tr>
<td>Education Law</td>
<td>Real Estate</td>
</tr>
<tr>
<td>Elder Law</td>
<td>Securities</td>
</tr>
<tr>
<td>Election, Campaign &amp; Political Law</td>
<td>Taxation</td>
</tr>
<tr>
<td>Eminent Domain</td>
<td>Technology and Science</td>
</tr>
<tr>
<td>Employee Benefits</td>
<td>Toxic Torts</td>
</tr>
<tr>
<td>Energy</td>
<td>Transportation</td>
</tr>
<tr>
<td>Entertainment and Sports</td>
<td>Trusts and Estates</td>
</tr>
<tr>
<td>Environmental Law</td>
<td>White Collar Crime</td>
</tr>
<tr>
<td>Family Law</td>
<td>Wills &amp; Probate</td>
</tr>
<tr>
<td>Finance</td>
<td>Worker’s Comp</td>
</tr>
<tr>
<td>Government / Government Contracts</td>
<td>Zoning, Planning &amp; Land Use</td>
</tr>
<tr>
<td>Health Care</td>
<td>Worker’s Comp</td>
</tr>
<tr>
<td>Other -- Specify:</td>
<td></td>
</tr>
</tbody>
</table>

2 -- How many separate **Library locations** are there in your firm across all offices? (List exact number)  
(Source: Law Library Benchmarks 2008-09 ed.)

Part B: About the Law Library Staff

3 -- To whom does the Director/Manager/Head of firm law libraries report?

____ CLO (Chief Legal Officer) or Managing Partner
____ CIO (Chief Information Officer) or IT Director
____ CFO (Chief Financial Officer) or Finance Director
____ COO (Chief Operations Officer), Dir of Administration, or Executive Director
____ Knowledge Management Officer
____ Library Committee/Partner
____ Other (Please specify : ____________________)

4 -- In addition to the law library, what other departments within the firm are managed by the Director/Manager/Head of firm law libraries? Check all that apply.

<table>
<thead>
<tr>
<th>Checkbox</th>
<th>Department</th>
<th>Checkbox</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Competitive Intelligence</td>
<td></td>
<td>Information Technology or Information systems</td>
</tr>
<tr>
<td></td>
<td>Conflicts</td>
<td></td>
<td>Knowledge Management</td>
</tr>
<tr>
<td></td>
<td>Continuing Legal Education</td>
<td></td>
<td>Marketing</td>
</tr>
<tr>
<td></td>
<td>Court services</td>
<td></td>
<td>Records Management/Files</td>
</tr>
<tr>
<td></td>
<td>Docket Research</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other: Pls specify ____________________________</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5 -- Indicate the total number of library staff employed by the firm at all locations in each of the following three employee categories.

_____ Librarians/Researchers (individuals with MLS, MIS, MBA, JD or equivalent experience)
_____ Library assistants, library paraprofessionals or clerical
_____ Technical (exclude anyone who could otherwise be classified as a Librarian)

6-- Does your firm require its professional librarians (information specialists) to have any of the following degrees or certifications? Check all that apply.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Yes</th>
<th>No</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters of Library Science, Masters of Information Science or some combination</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>JD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBA</td>
<td></td>
<td></td>
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<tr>
<td>PhD</td>
<td></td>
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<td></td>
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<tr>
<td>2nd Subject Masters</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Certification such as paralegal, certified records manager, etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7 - When hiring NEW library employees, what are the minimum years of required experience for the following categories of jobs? Check only one in each employee category.

<table>
<thead>
<tr>
<th>Employee Categories</th>
<th>0-1 Years</th>
<th>2-3 Years</th>
<th>4-7 Years</th>
<th>8-10+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director/Manager/Head of Library Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8 - Consider all library employees in each category across the entire firm. **On average**, how long have EXISTING employees worked for the law firm library in the following job categories? Check only one range in a category. For example if there were three librarians on staff with 3, 11 and 7 years of service respectively at the law library, the average years of service for all three would be 7 (3+11+7=21 / 3 = 7).

<table>
<thead>
<tr>
<th>Employee Categories</th>
<th>1-3 Years</th>
<th>4-7 Years</th>
<th>8-10 Years</th>
<th>11+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director/Manager/Head of Library Services</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Librarian/Information Professional</td>
<td></td>
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<tr>
<td>Library Assistant</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

9 - Which **professional development** activities are offered by your firm to library **staff**? Check all that apply.

__ Professional association conference attendance  
__ Continuing education classes or workshops at a college or university  
__ Continuing education classes sponsored by AALL or other Professional Association  
__ In-house or on-the-job training  
__ Tuition reimbursement for training for a certification such as a paralegal certification  
__ Tuition reimbursement for university undergraduate/graduate school coursework leading to a degree  
__ Membership dues in a professional association  
__ Vendor instructional classes  
__ None  
__ Other (specify): ________________________________

10 - What is the average number of billable hours attributed to a full-time library or information services staff member each year? _______________

11 - What is the average hourly billing rate for library and information services staff time? ___________________

**Part C: About the Law Library (ies)** (Please provide aggregate answers for all Firm libraries.)

12 --Which statement best describes the library’s status in the firm? Check only one.

_____ The firm library(ies) is/are an independent department within the firm.
_____ The firm library(ies) is/are part of a department. **BRANCH to question:** What is the unit within the firm under which the library or information center falls?

13 --What is the total 2008 budget for the firm’s entire library/information system? NOTE: This figure is required to calculate the spend per attorney cost.

14 - Does the law library provide any of these services for the firm’s website, internet, or intranet? Check all that apply.

<table>
<thead>
<tr>
<th>Role</th>
<th>Website</th>
<th>Internet</th>
<th>Intranet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Webmaster</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liaison between vendors and IT Dept. for access to library managed content</td>
<td></td>
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<tr>
<td>Prepares firm intranet content</td>
<td></td>
<td></td>
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<tr>
<td>Prepares &amp; updates library or firm web pages</td>
<td></td>
<td></td>
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<tr>
<td>Prepares &amp; updates library webpage content including links to selected external or internal sites (e.g. experts database)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Other: Please Specify</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15 – Indicate the type of information resources purchased by the firm’s law library(ies) and how they are accessed. Check all that apply.

<table>
<thead>
<tr>
<th>Source Accessed</th>
<th>Print</th>
<th>Digital</th>
<th>Print and Digital</th>
<th>Global License and/or can be accessed through Firm Intranet</th>
<th>Use in Library Only License</th>
<th>For a select subscriber group only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar certification practice exams</td>
<td></td>
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<tr>
<td>Benchmarking studies</td>
<td></td>
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<tr>
<td>Business/Management content</td>
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<td></td>
</tr>
<tr>
<td>Books / CDs / DVDs</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Case Law</td>
<td></td>
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<tr>
<td>Company profiles (public &amp;/or private)</td>
<td></td>
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<tr>
<td>Conference Proceedings</td>
<td></td>
<td></td>
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<tr>
<td>Continuing Legal Education (CLE) course materials, etc.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Country/Economic/Demographic data</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Directories (Legal &amp; Corporate)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Documentation</td>
<td></td>
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<td></td>
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<tr>
<td>Industry or Financial Analysts’ Reports</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
16 – If your firm has more than one location with more than one library, how is the library catalogue handled?

___ Separate for each location
___ A union catalogue including holdings from every office
___ Separate catalogues, but searchable from each location

17—Indicate which law library services are offered and how/where they are accessed or requested by users. Check all that apply EVEN IF THE SERVICE IS NOT AVAILABLE AT ALL FIRM LIBRARIES, IS OUTSOURCED, OR NOT ASSOCIATED WITH THE ACTUAL LIBRARY.

<table>
<thead>
<tr>
<th>Library Service</th>
<th>How service can be requested, accessed or used:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In the library</td>
</tr>
<tr>
<td>Acquisitions, content evaluation, contract negotiation for e-content</td>
<td></td>
</tr>
<tr>
<td>Blogs, Wikis, social networking presence (Twitter, etc) for firm</td>
<td></td>
</tr>
<tr>
<td>Circulate or route library materials</td>
<td></td>
</tr>
<tr>
<td>Client conflict resolution research</td>
<td></td>
</tr>
<tr>
<td>Data analysis of industries, markets, patents or other research results</td>
<td></td>
</tr>
<tr>
<td>Document delivery or Inter-library loan requests</td>
<td></td>
</tr>
<tr>
<td>Legislative histories</td>
<td></td>
</tr>
<tr>
<td>Materials / content purchase requests</td>
<td></td>
</tr>
</tbody>
</table>
18 – Which, if any, of the following are outsourced by the firm library? Check all that apply.

_____Cataloging or technical services
_____Legal or other type of research
_____Loose-leaf filing or pocket part replacement
_____Patent or Trademark (intellectual property) research of any type
_____Photocopying, document delivery or inter-library loan
_____Printing/binding
_____Other (specify): ________________________________
_____None

Part D: About the Firm and Law Library’s Knowledge Management Activities

19 – Does your Firm have a written formal knowledge management strategy?
   Yes ________   No________

20 – Rank the top three objectives of knowledge management initiatives at your firm.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Rank 1</th>
<th>Rank 2</th>
<th>Rank 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a more satisfying work environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gain competitive advantage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify subject matter experts within the firm to leverage expertise</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Improve consistency of output</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve lawyer development</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
21 – In which knowledge management initiatives has your firm invested? Indicate the ones in which the law library participates. Check all that apply.

<table>
<thead>
<tr>
<th>Knowledge Management Activity</th>
<th>Part of firm KM Activities</th>
<th>Provided by the library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best practice model documents or forms repository</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business and industry information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business development/marketing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case law, commentary and interpretation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clause Library</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLE materials/documents repository</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communities of practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive intelligence/business information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client relationship management system – existing client information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current affairs / monitoring services updates in digital form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debriefing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External seminars and presentations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm and practice area information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm market position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm’s revenue, costs and profitability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Know how” files or repository / internal training papers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal research tools and systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legislation (and commentary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library and information services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mentoring and coaching program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methodologies and processes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online services (intranet, extranet, etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past projects (lessons learned) database</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice and litigation support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Precedents/forms repository</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional development program for firm members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proposal database</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prospective client information / Proposal database</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills and expertise locator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxonomy initiatives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third party contact database (e.g. regulators, judges, counsel, experts, and consultants)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
22 -- How would you characterize your firm’s approach to knowledge management?  (Source: 2006 Global KM Survey)

- Centralized – Central knowledge management function directs all knowledge management initiatives.
- Decentralized – Knowledge management initiatives are pursued without an overarching firm-wide knowledge management strategy. Heavy emphasis on practice area and individuals needs.
- Hybrid – Central knowledge management function sets the direction for knowledge management and provides the infrastructure for practice area knowledge management.

23 –Choose the ONE ANSWER which best describes the library’s relationship to the Knowledge Management function.

- Reports to the head of Knowledge Management
- Has dual reporting line to the head of Knowledge Management
- Library staff member sits on a committee with the head of Knowledge Management
- Informal, collaborative relationship
- No relationship
- Other: please specify______________________________________________

24--Which of the following information management services related to Knowledge Management initiatives are provided by the library? **Check all that apply.**

**Knowledge Management Service**

- Defines indexing rules and procedures
- Development and/or maintenance of authority lists to support taxonomies / meta-data
- Development and/or maintenance of business rules for using data elements that can be leveraged to increase access to firm knowledge
- Development and/or maintenance of a firm-wide “KnowledgeBase” repository to house content such as an experts database, case materials, documents for re-use or to track potential and existing clients
- Development and/or maintenance of a firm-wide taxonomy and/or meta-data
- Development and/or maintenance of queries required to support dynamic delivery of content to the firm’s intranet
- Evaluate knowledge management tools /technologies
- Manage or co-manage the Firm’s knowledge management activities
- Library staff member sits on a committee with the head of Knowledge Management
- Set the Firm’s knowledge management policies Supervise the operation and maintenance of the firm’s search tools
- Troubleshoot and monitor search activity
- Other (specify) ____________________________
Part E: About Measuring and Communicating The Library’s Value

25--What is the law firm’s opinion of the law library?

___ They view the library as a cost center and plan to phase out the traditional library within the next 5 years.
___ They aggressively support the library.
___ They seem to want to downsize the library but generally maintain it with a stable budget.
___ Opinion varies by firm location, by attorney and/or practice area.

26--What data is collected to illustrate the law library’s value to practice management? Check all that apply.

___ Attorney/Staff/User time saved
___ Business Development activities (prospective client or industry profiles, etc)
___ Circulation statistics
___ Client hours billed by library attributed to library work or resources
___ Library customer testimonials
___ Cost avoidance statistics such as cost avoided by circulating library collection
___ Cost per use of online resources
___ Cost savings (please specify------------------------)
___ Customer (attorneys/staff) interaction or training incidences
___ Customer (attorneys/staff) testimonials about library contributions
___ Direct savings attributed to library by firm attorneys/staff
___ Number of research projects
___ Revenue attributed to the library by firm attorneys/staff (exclude client hours billed)
___ Risk mitigation (copyright compliance, online license negotiations)
___ Savings in consolidated purchasing of information resources for the entire organization
___ Summary of library staff work on the firm’s intranet or internet
___ Summary of library staff participation in knowledge management activities
___ None
___ Other (specify): ______________________________

27--What method(s) do you use to communicate the value of law library services to practice management? Check all that apply.

___ Activity based costing
___ Annual report to law firm management
___ Balanced Scorecard
___ Cost Benefit Analysis
___ Knowledge value-add
___ Library marketing/promotional materials
___ Return on Investment
___ Testimonials / story telling
___ Strategic approaches (report of activities mapped to strategic plan goals)
___ None
___ Other: ______________________________________

28 – Which of the library and/or information service’s attributes do you think make your partners/attorneys/staff most productive?
29 – What are barriers to the law library’s ability to increase partners/attorneys/staff productivity?

30 – Comments: ______________________________________________________________

---------------- END OF SURVEY ----------------

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Forthcoming Study on Characteristics of Law Libraries Serving Highly Profitable Private Law Firms

Chandler, Yvonne

Sent: Thursday, February 04, 2010 7:02 PM
To: Chandler, Yvonne

You will soon receive an email invitation to participate in a new study being conducted among law libraries serving the Am Law 200. The purpose of the study is to determine law library characteristics most likely to affect a private law firm's financial success and is titled, "Using Financial Rankings to Benchmark Libraries Serving Highly Profitable Private Law Firms: Implications for Productivity".

This research is significant because it will be the first to validate a relationship between law libraries and a private law firms' financial success or productivity. As you know, industry benchmarks for typical private law firm library characteristics have been established in multiple studies conducted over several years. But no research has identified common characteristics of law libraries serving only the highest grossing, most profitable private law firms in the United States.

A model of law library staffing, operations, and services at highly profitable private law firms will be constructed from research findings. Law library and firm administrators can use the model to support strategic decision making, as a basis for determining policies and procedures, and to allocate resources.

Margaret Abey Carroll, a doctoral candidate and former manager of Microsoft Corporation site libraries, is conducting the study to fulfill the research requirement for the Interdisciplinary PhD in Information Science at the University of North Texas, College of Information. Codes, known only to Ms. Carroll, are being assigned to survey respondents to protect anonymity. Findings are being reported in aggregate format to ensure confidentiality so that data will not be associated with any one firm.

I urge you to complete the 25-question survey so that a high response rate can ensure valid results. Let us try to exceed the 49% response rate for the last Am Law 200 Law Librarians survey.

I am serving as Chair of Ms. Carroll's dissertation committee. Please email questions about the study to me at Yvonne.chandler@unt.edu or call me at 940-565-3777.

Best regards,

Yvonne J. Chandler, Associate Professor and
Director, Nevada, Georgia, and SW/M Cohort Programs
University of North Texas College of Information
Department of Library and Information Sciences

https://webmail.unt.edu/OWA/?AuthResend19088C2350124b5995AB75012FA40... 6/24/2010
APPENDIX E

E-MAIL INVITATION TO PARTICIPATE IN THE STUDY
Your assistance is needed. A survey of Am Law 200 law libraries is being conducted to validate a relationship between law libraries and a private law firms’ financial profitability (productivity). This study is significant because it is the first to identify characteristics of law libraries serving only the highest grossing, most profitable private law firms in the United States...the top .42%!

Precautions have been taken to ensure confidentiality for you, your firm, and the survey response. Launch the survey to learn more. You can start, stop, and return to the survey until you have completed it and hit "Done" to submit it. The 25 questions should take you about 25 minutes to answer.

Here is a link to the survey:  https://www.surveymonkey.com/s/

It is important that your firm be represented in this study's findings. If you cannot complete the survey, please email me the name and email address of someone from your firm who can serve as a substitute. Your firm's data is needed to produce valid survey findings.

Your response is greatly appreciated. An executive summary of aggregate findings will be sent by Sept 1st as a thank you for your participation.

Margaret Aby Carroll
Doctoral Teaching Fellow
University of North Texas
College of Information
Dept of Library & Information Science
APPENDIX F

SURVEY INSTRUMENT
INTRODUCTION

My name is Margaret Aby Carroll and I am a candidate in the Interdisciplinary Ph.D. Program in Information Science at the University of North Texas – College of Information – Dept. of Library and Information Science. You are invited to participate in a research study of law libraries serving the 200 most profitable private law firms in the United States.

The significance of this study is that it provides empirical research about which law library characteristics are associated with a private law firm’s financial success. Results can be used to initiate or justify budgets; support decision making about services, staff, the collection, and the allocation of resources; to formulate useful methods for reporting library value to the firm’s senior management.

Please take the 20-25 minutes needed to complete this 25-question survey. Responses should be composite answers for ALL of your firm’s Libraries or Information Centers at ALL firm locations. If you cannot answer the questions in this survey, please email me contact information for someone within the firm who can. It is important that your firm’s data be submitted if the survey results are to be considered valid.

Completing the survey within the first week of its receipt will greatly facilitate this project. Thank you in advance for your participation.

Sincerely,

Margaret Aby Carroll
University of North Texas
College of Information
Dept. of Library & Information Studies
940-565-2445 - School Office

INFORMED CONSENT NOTICE
Online Survey Instrument

Title of Study: Benchmarking Characteristics of Libraries Serving Highly Profitable Private Law Firms: Strategic Implications for Value and Productivity

Principle Investigator: Dr. Yvonne Chandler, Assistant Professor University of North Texas, Department of Library and Information Science, will oversee this research study.

Purpose of the Study: This study is being conducted to fulfill the PhD research requirement for candidate Margaret Aby Carroll. The purpose of this study is to determine law library characteristics related to a private law firm’s financial success.

Study Procedures: You are asked to complete this online survey which will take approximately 20 - 25 minutes of your time.

Foreseeable Risks: There is no risk to individual participants. Though the survey is not anonymous each potential subject and their employer is being assigned a code to ensure anonymity of responses for data analysis and reporting in any public forum or publication. To further ensure anonymity, the 200 subjects are being segmented into groups of 50 based on their 2008 gross revenue and designated Mega, Large, Medium and Small. Any published data will only be reported for a segment.
Benefits to the Subjects or Others: This study is not expected to be of any direct benefit to an individual participant. However, the research will contribute to the field of Law Librarianship since there is no research linking specific law library characteristics with private law firm’s financial profitability. Library Administrators/Directors/Heads/Managers can use study findings to develop policies and procedures; determine allocation of resources; inform strategic decision making in the administration of law libraries; calculate and communicate the value of the law library for senior law firm management.

Compensation: Participants are not offered any compensation for completing the survey.

Procedures for Maintaining Confidentiality of Research Records: Though the survey is not anonymous each of the potential subjects and their corresponding law firm employer is being assigned a numerical code to ensure anonymity of responses for purposes of data analysis and reporting in any public forum or publication. To further ensure anonymity, subjects and their employers will be divided into four groups of 50. Research results will be presented as the mean for characteristics of each of the four segments. The key to codes assigned to survey respondents and their law firm will be known only to the key personnel. The code key is to be maintained in a password protected Excel file in electronic format on a DVD-R. The study records will be stored in the Principal Investigator's office on the UNT campus.

Questions about the Study: If you have any questions about the study, email them to me at margaret.carroll@unt.edu or call me at 817-797-3919. You can also ask questions of my dissertation committee chair, Dr. Yvonne Chandler, designated principle investigator and Associate Professor, University of North Texas, College of Information, Dept. of Library and Information Science – 940-565-3777.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940.

If you complete this survey you are implying consent for the information to be used in the described form. You are free to withdraw your consent and cease participation at any time. Responding subjects will receive a blind participant summary of findings in mid June, 2010.

You may print this document for your records.

PART A: ABOUT THE LAW LIBRARY STAFF

1 --To whom does the Director/Manager/Head of firm law libraries report?

_____ CEO (Chief Executive Officer), CLO (Chief Legal Officer) or Managing Partner
_____ CIO (Chief Information Officer) or IT Director
_____ CFO (Chief Financial Officer) or Finance Director
_____ COO (Chief Operations Officer), Dir of Administration, or Executive Director
_____ Knowledge Management Officer
_____ Library Committee/Partner

2 -- In addition to the law library, what other departments within the firm are managed by the Director/Manager/Head of firm law libraries? Check all that apply.

<table>
<thead>
<tr>
<th>Checkbox</th>
<th>Department</th>
<th>Checkbox</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Business Development</td>
<td></td>
<td>Information Technology or Information systems</td>
</tr>
<tr>
<td></td>
<td>Competitive Intelligence</td>
<td></td>
<td>Knowledge Management</td>
</tr>
</tbody>
</table>
3-- Does your firm require its research and other professional librarians to have any of the following degrees or certifications? Check all that apply.

<table>
<thead>
<tr>
<th>Degree</th>
<th>Checkbox</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters of Library Science, Masters of Information Science, PhD in Library or Information Science</td>
<td></td>
</tr>
<tr>
<td>JD</td>
<td></td>
</tr>
<tr>
<td>MBA or 2nd Subject Masters</td>
<td></td>
</tr>
<tr>
<td>Certification such as paralegal or certified records manager, etc.</td>
<td></td>
</tr>
</tbody>
</table>

4-- When hiring NEW library employees, what is the minimum years of experience generally required for the following categories of jobs? Check the one range for each employee category most often used at all firm library locations.

<table>
<thead>
<tr>
<th>Employee Categories</th>
<th>0-1 Years</th>
<th>2-3 Years</th>
<th>4-6 Years</th>
<th>7-9+ Years</th>
<th>10+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator/Director/Manager/Head of Library Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Services and Technical Services Librarians or Researchers - individuals with MLS, MIS, MBA, JD or equivalent experience not focused on technology tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Assistants/Paraprofessionals or clerks – individuals performing non-professional level work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systems Librarians, Webmasters, Taxonomists or other staff focused on technology – include only individuals not already counted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5-- Indicate the TOTAL NUMBER of library staff working in each job category according to their years of employment at the firm. Account for all library and information services staff at all firm locations.

<table>
<thead>
<tr>
<th>Employee Categories</th>
<th>1-3 Years</th>
<th>4-6 Years</th>
<th>7-9 Years</th>
<th>10-12 Years</th>
<th>13+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator/Director/Manager/Head of Library Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Services and Technical Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Librarians or Researchers - individuals with MLS, MIS, MBA, JD or equivalent experience not focused on technology tasks

Library Assistants/Paraprofessionals or clerks – individuals performing non-professional level work

Systems Librarians or other staff exclusively focused on Technology based activities – include only individuals not already accounted for

6- Which professional development activities are offered by your firm to library staff? Check all that apply.

__ Continuing education classes or workshops at a college or university
__ Continuing education classes sponsored by AALL or other Professional Association
__ In-house or on-the-job training
__ Membership dues in a professional association
__ Professional association conference attendance
__ Tuition reimbursement for training for a certification such as a Paralegal certification
__ Tuition reimbursement for university coursework leading to a degree
__ Vendor instructional classes
__ None
__ Other (specify): _______________________________________________

7 - What is the average hourly billing rate (or range of hourly billing rates if there is a multiple rate schedule) charged for library and information services staff time? ________________

8- What is the average number of billable hours attributed to all full-time library or information services staff member in your library each year? ________________

Part B: ABOUT THE LAW LIBRARY (Please provide aggregate answers representative of all Firm libraries.)

9 – For which practice areas in the firm does the library do the most work? Please check all practice areas that apply for all firm locations. (Source of list entries: Martindale-Hubbell Connected @Martindale.com, a Lexis-Nexis site – August 15, 2009)

<table>
<thead>
<tr>
<th>Practice Areas</th>
<th>Practice Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Law</td>
<td>Immigration</td>
</tr>
<tr>
<td>Admiralty &amp; Maritime Law</td>
<td>Indians &amp; Native Populations</td>
</tr>
<tr>
<td>Agricultural Law</td>
<td>Insurance</td>
</tr>
<tr>
<td>Alternative Dispute Resolution</td>
<td>Intellectual Property</td>
</tr>
<tr>
<td>Antitrust &amp; Trade Regulation</td>
<td>International Law</td>
</tr>
<tr>
<td>Appellate Practice</td>
<td>International Trade</td>
</tr>
<tr>
<td>Aviation and Aerospace</td>
<td>Internet Law</td>
</tr>
<tr>
<td>Banking Law</td>
<td>Investments</td>
</tr>
<tr>
<td>Bankruptcy</td>
<td>Labor and Employment</td>
</tr>
<tr>
<td>Business Law</td>
<td>Legal Malpractice</td>
</tr>
<tr>
<td>Civil Rights</td>
<td>Litigation</td>
</tr>
<tr>
<td>Class Actions</td>
<td>Media Law</td>
</tr>
<tr>
<td>Commercial Law</td>
<td>Medical Malpractice</td>
</tr>
</tbody>
</table>
10 --How many separate **Library locations** are there in your firm across all offices? (List exact number)

11 --So the spend per attorney can be calculated, provide the firm’s total 2008 (yes, 2008) budget for all library and information services across the entire firm. Exclude salaries and benefits. Deduct any recovered costs IF monies are credited to the library's budget.

12 - Does the law library provide any of these services or support staff for the firm’s internet or intranet? Check all that apply.

<table>
<thead>
<tr>
<th>Role</th>
<th>Internet (External to Public View)</th>
<th>Intranet (Private for Firm Only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liaison between the library staff and practice groups on intranet content</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liaison between content vendors and firm’s IT Dept. for accessing library managed content on the intranet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepares and updates <strong>firm</strong> internet web pages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepares and updates <strong>firm</strong> intranet web pages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepares &amp; updates <strong>library</strong> intranet web page <strong>content</strong> (e.g. library’s online catalog or an experts database)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Webmaster</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13 - Indicate the information resources purchased for the firm’s law library(ies) according to how the content is accessed. Check all that apply.

<table>
<thead>
<tr>
<th>Source Accessed</th>
<th>Print in the Library</th>
<th>Global License - accessible either in the library or through one or more online locations</th>
<th>Library Only License - accessible only in a firm library</th>
<th>Restricted License - accessible only by a set subscriber group in the library OR through one or more online locations</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>Law Library Services</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Company Reports – 10-Ks, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bar certification practice exams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benchmarking studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business/Management content</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Books / CDs / DVDs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Law/Reporters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company profiles (public &amp;/or private)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference Proceedings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuing Legal Education (CLE) course materials, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country/Economic/Demographic data</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Court Documents like dockets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Directories (Legal &amp; Corporate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert Witness Documentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry or Financial Analysts' Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journals – Magazines - Newspaper subscriptions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Law journals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal forms and formbooks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loose-leaf services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market Research Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online database services (D &amp; B, Dialog, Factiva, FastCase, HeinOnline, Hoovers, Loislaw, PACER, LexisNexis, Westlaw, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulatory and/or Agency materials, reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standards or Technical Reports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax forms and sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatises and Topical Law materials</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14— Indicate which law library services are offered and how/where they can be requested, accessed, or used. Check all that apply even if the service is not offered in all firm libraries or is outsourced to a third party.
15 – If law library holdings are cataloged, how is the catalog handled if your firm has multiple locations with multiple libraries?

- Separate catalog for each location
- A union catalog including holdings from every office
- Separate catalogue, but searchable from each location

16 – In addition to coming to the library for personal service, what other methods or technologies can law firm attorneys, paralegals and staff use to communicate with library staff? Check all that apply.

<table>
<thead>
<tr>
<th>Library Service</th>
<th>In the library</th>
<th>At one's office</th>
<th>Remote location (Not a Firm Office)</th>
<th>Using Mobile or Handheld Device</th>
<th>Social Networking Tools (Social Networking Tools – Twitter, Wikis, Blogs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisitions, content evaluation, contract negotiation for e-content</td>
<td>Library Service</td>
<td>Library Service</td>
<td>Library Service</td>
<td>Library Service</td>
<td>Library Service</td>
</tr>
<tr>
<td>Blog, Wikis, social networking</td>
<td>Blog, Wikis, social networking</td>
<td>Blog, Wikis, social networking</td>
<td>Blog, Wikis, social networking</td>
<td>Blog, Wikis, social networking</td>
<td>Blog, Wikis, social networking</td>
</tr>
<tr>
<td>Competitor intelligence research and analysis</td>
<td>Competitor intelligence research and analysis</td>
<td>Competitor intelligence research and analysis</td>
<td>Competitor intelligence research and analysis</td>
<td>Competitor intelligence research and analysis</td>
<td>Competitor intelligence research and analysis</td>
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<tr>
<td>Client contact resolution research</td>
<td>Client contact resolution research</td>
<td>Client contact resolution research</td>
<td>Client contact resolution research</td>
<td>Client contact resolution research</td>
<td>Client contact resolution research</td>
</tr>
<tr>
<td>Court information</td>
<td>Court information</td>
<td>Court information</td>
<td>Court information</td>
<td>Court information</td>
<td>Court information</td>
</tr>
<tr>
<td>Data analysis of industries, markets, results</td>
<td>Data analysis of industries, markets, results</td>
<td>Data analysis of industries, markets, results</td>
<td>Data analysis of industries, markets, results</td>
<td>Data analysis of industries, markets, results</td>
<td>Data analysis of industries, markets, results</td>
</tr>
<tr>
<td>Desk copies</td>
<td>Desk copies</td>
<td>Desk copies</td>
<td>Desk copies</td>
<td>Desk copies</td>
<td>Desk copies</td>
</tr>
<tr>
<td>Document delivery or inter-library loan requests</td>
<td>Document delivery or inter-library loan requests</td>
<td>Document delivery or inter-library loan requests</td>
<td>Document delivery or inter-library loan requests</td>
<td>Document delivery or inter-library loan requests</td>
<td>Document delivery or inter-library loan requests</td>
</tr>
<tr>
<td>Legislative histories</td>
<td>Legislative histories</td>
<td>Legislative histories</td>
<td>Legislative histories</td>
<td>Legislative histories</td>
<td>Legislative histories</td>
</tr>
<tr>
<td>Materials, content purchase requests and suggestions</td>
<td>Materials, content purchase requests and suggestions</td>
<td>Materials, content purchase requests and suggestions</td>
<td>Materials, content purchase requests and suggestions</td>
<td>Materials, content purchase requests and suggestions</td>
<td>Materials, content purchase requests and suggestions</td>
</tr>
<tr>
<td>Personal Subscription or book purchase requests for firm libraries</td>
<td>Personal Subscription or book purchase requests for firm libraries</td>
<td>Personal Subscription or book purchase requests for firm libraries</td>
<td>Personal Subscription or book purchase requests for firm libraries</td>
<td>Personal Subscription or book purchase requests for firm libraries</td>
<td>Personal Subscription or book purchase requests for firm libraries</td>
</tr>
<tr>
<td>Reference or research on demand</td>
<td>Reference or research on demand</td>
<td>Reference or research on demand</td>
<td>Reference or research on demand</td>
<td>Reference or research on demand</td>
<td>Reference or research on demand</td>
</tr>
<tr>
<td>Reference or research on firm historical content</td>
<td>Reference or research on firm historical content</td>
<td>Reference or research on firm historical content</td>
<td>Reference or research on firm historical content</td>
<td>Reference or research on firm historical content</td>
<td>Reference or research on firm historical content</td>
</tr>
<tr>
<td>Targeted news services that distribute focused content to selected audiences</td>
<td>Targeted news services that distribute focused content to selected audiences</td>
<td>Targeted news services that distribute focused content to selected audiences</td>
<td>Targeted news services that distribute focused content to selected audiences</td>
<td>Targeted news services that distribute focused content to selected audiences</td>
<td>Targeted news services that distribute focused content to selected audiences</td>
</tr>
<tr>
<td>Training on use of library resources, training on use of social networking websites, Blogs, Wikis, online government resources and/or the Internet for attorneys, law clerks, summer associates, paralegals, or staff</td>
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</tr>
</tbody>
</table>

- Acquisitions, content evaluation, contract negotiation for e-content
- Blog, Wikis, social networking
- Competitor intelligence research and analysis
- Client contact resolution research
- Targeted news services that distribute focused content to selected audiences
- Training on use of library resources, training on use of social networking websites, Blogs, Wikis, online government resources and/or the Internet for attorneys, law clerks, summer associates, paralegals, or staff
17 – Which, if any, of the following are outsourced by the firm library? Check all that apply.

- Any type of research including Legal, Patent or Trademark (intellectual property)
- Cataloging or technical services
- Contacting vendors
- Loose-leaf filing or pocket part replacement
- Photocopying, document delivery, or inter-library loan
- Printing/binding
- Shelving
- Staffing
- None

PART C: ABOUT THE FIRM AND LIBRARY’S KNOWLEDGE MANAGEMENT ACTIVITIES

18 – Does your Firm have a written formal knowledge management strategy?

- Yes
- No

19 – In which knowledge management initiatives has your firm invested? Also indicate the ones in which the law library participates. Check all that apply.

<table>
<thead>
<tr>
<th>Knowledge Management Activity</th>
<th>Firm KM Activities</th>
<th>Provided by the library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best practice model documents or forms repository</td>
<td></td>
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<tr>
<td>Business and industry information</td>
<td></td>
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<tr>
<td>Business development/marketing</td>
<td></td>
<td></td>
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<tr>
<td>Case law, commentary and interpretation</td>
<td></td>
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<tr>
<td>Clause Library</td>
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<tr>
<td>CLE materials/documents repository</td>
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<tr>
<td>Communities of practice</td>
<td></td>
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<tr>
<td>Competitive intelligence/business information system</td>
<td></td>
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<tr>
<td>Client relationship management system – existing client information</td>
<td></td>
<td></td>
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<tr>
<td>Current affairs / monitoring services updates in digital form</td>
<td></td>
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<tr>
<td>Debriefing</td>
<td></td>
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<tr>
<td>External seminars and presentations</td>
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<tr>
<td>Firm and practice area information</td>
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<tr>
<td>Firm market position</td>
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<tr>
<td>Firm’s revenue, costs and profitability</td>
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<td></td>
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<tr>
<td>“Know how” files or repository / internal training papers</td>
<td></td>
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<tr>
<td>Legal research tools and systems</td>
<td></td>
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<tr>
<td>Legislation (and commentary)</td>
<td></td>
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<tr>
<td>Mentoring and coaching program</td>
<td></td>
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<tr>
<td>Methodologies and processes</td>
<td></td>
<td></td>
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<tr>
<td>Office design</td>
<td></td>
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<tr>
<td>Online services (intranet, extranet, etc)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past projects (lessons learned) database</td>
<td></td>
<td></td>
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<tr>
<td>Practice and litigation support</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
20– What are the three most important objectives driving knowledge management initiatives at your firm? SELECT ONLY 3.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Rank 1</th>
<th>Rank 2</th>
<th>Rank 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a more satisfying work environment</td>
<td></td>
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<tr>
<td>Gain competitive advantage</td>
<td></td>
<td></td>
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<tr>
<td>Identify subject matter experts within the firm to leverage expertise</td>
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<tr>
<td>Improve consistency of output</td>
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<tr>
<td>Improve lawyer development</td>
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<td></td>
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<tr>
<td>Improve firm productivity</td>
<td></td>
<td></td>
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<tr>
<td>Improve quality of client service</td>
<td></td>
<td></td>
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<tr>
<td>Improve quality of legal knowledge</td>
<td></td>
<td></td>
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<tr>
<td>Improve speed of client service delivery</td>
<td></td>
<td></td>
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<tr>
<td>Increase firm revenues</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Manage risk</td>
<td></td>
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<td></td>
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<tr>
<td>Reduce/eliminate duplication</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Other – please specify</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

21– Which of the following information management services related to Knowledge Management initiatives are provided by the library? Check all that apply.

<table>
<thead>
<tr>
<th>Information Management Service used for KM</th>
<th>CheckBox</th>
</tr>
</thead>
<tbody>
<tr>
<td>- None</td>
<td></td>
</tr>
<tr>
<td>- Defines indexing rules and procedures</td>
<td></td>
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<tr>
<td>- Develop and/or maintain authority lists</td>
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</tr>
<tr>
<td>- Develops and/or maintains business rules for using data elements that can be leveraged to increase access to firm knowledge</td>
<td></td>
</tr>
<tr>
<td>- Develops and/or maintains a firm-wide “Knowledgebase” repository to house content such as an experts database, case materials, documents for re-use or to track potential and existing clients</td>
<td></td>
</tr>
<tr>
<td>Develops and/or maintains a firm-wide taxonomy and/or meta-data</td>
<td></td>
</tr>
<tr>
<td>- Develops and/or maintains queries required to support dynamic delivery of content to the firm’s intranet</td>
<td></td>
</tr>
<tr>
<td>- Evaluates knowledge management tools/technologies</td>
<td></td>
</tr>
<tr>
<td>- Manages or co-manages the Firm’s knowledge management activities</td>
<td></td>
</tr>
<tr>
<td>- Library staff member sits on a committee with the head</td>
<td></td>
</tr>
</tbody>
</table>
PART D: ABOUT MEASURING AND COMMUNICATING THE LIBRARY’S VALUE

22—What is the law firm’s opinion of the law library?
___ They view the library as a cost center and plan to phase out the traditional library within the next 5 years.
___ They aggressively support the library.
___ They seem to want to downsize the library but generally maintain it with a stable budget.
___ Opinion varies by firm location, by attorney and/or practice area. (Suggested by Lynette)

23—What data is collected and/or reported to demonstrate the law library’s value to practice management? Check all that apply.
___ Attorney/Staff/User time saved
___ Business Development activities (prospective client or industry profiles, etc)
___ Circulation statistics
___ Client hours billed by library attributed to library work or resources
___ Competitive intelligence that produced some benefit to the firm
___ Cost avoidance statistics such as cost avoided by circulating library collection
___ Cost per use of online resources
___ Cost savings
___ Customer (attorneys/staff) interaction or training incidences
___ Customer (attorneys/staff) testimonials about library contributions
___ Direct savings attributed to library by firm attorneys/staff
___ Number of research projects
___ Revenue attributed to the library by firm attorneys/staff (exclude client hours billed)
___ Risk mitigation (copyright compliance, online license negotiations)
___ Savings in consolidated purchasing of information resources for the entire organization
___ Summary of library staff work on the firm’s intranet or internet
___ Summary of library staff participation in knowledge management activities
___ None
___ Other (specify): ____________________________________________________________

24—What method(s) do you use to communicate the value of law library services to practice management? Check all that apply.
___ Activity based costing
___ Annual report to law firm management
___ Balanced Scorecard
___ Cost Benefit Analysis
___ Knowledge value-add
___ Library marketing/promotional materials
___ Participate in partner or practice group meetings
___ Return on Investment
___ Testimonials / story telling
25– Which library attributes or services do you think make the greatest contribution to your partners/attorneys/staff productivity?

_____________________________________________________

Thank you for participating in this survey. A blind executive summary of the aggregated findings will be sent to you mid-2010.

------------    END OF SURVEY    ----------------
APPENDIX G

1st AND 2nd REMINDER TO PARTICIPATE IN STUDY
From: Carroll, Margaret  
Sent: Tuesday, March 30, 2010 3:06 PM  
To:  

Subject: REMINDER: Law Library Survey Announced by Dr. Yvonne Chandler Now Available

Please complete the survey as soon as possible so your firm's data can become part of the study findings.

Here is your link to the survey: https://www.surveymonkey.com/s/

Thanks in advance for contributing to this study which will provide evidence for evidence-based practice.

Margaret Aby Carroll  
Doctoral Teaching Fellow  
University of North Texas  
College of Information  
Dept of Library & Information Science
APPENDIX H

LAST CALL TO PARTICIPATE IN STUDY (3rd REMINDER)
From: Carroll, Margaret  
Sent: Wednesday, April 21, 2010 2:56 PM  
To:  
Subject: Last Call to Participate: Law Library Survey Announced by Dr. Yvonne Chandler

The survey will be closing at midnight, Sunday, April 25th. Please reconsider your decision to participate. Your firm's data is very important to the success of this research since it is among the 50 highest ranked by Revenue per Lawyer.

Simply click on this link to the survey: ========================== to begin. It should take about 20-25 minutes to complete. Please be assured that extraordinary measures have been taken to retain the confidentiality of the data. I am the only person who actually knows the identity of the respondents and who can associate data with a specific firm.

If you have any questions, any at all, feel free to call or email me.

Margaret Aby Carroll  
Doctoral Teaching Fellow  
University of North Texas  
College of Information  
Dept of Library & Information Science
APPENDIX I

LAST CHANCE TO PARTICIPATE – DR. CHANDLER
IT'S NOT TOO LATE: IMPORTANT LAW LIBRARY SURVEY PARTICIPATION STILL NEEDED

Chandler, Yvonne

Sent: Wednesday, April 28, 2010 1:35 PM
To: Carroll, Margaret; Chandler, Yvonne

Hello Colleagues,

There has been good participation in the study being conducted by my doctoral student Margaret Aby Carroll on valuing law library services. This is such an important and exciting research project, one of the first looking at law librarianship. This study is important to law librarianship as it is the first to link law library characteristics to a private law firm's profitability. Because your firm is among the very highest ranked AM Law 200 firms, I am writing to ask you to please participate before the survey closes at midnight, Sat., May 1st. Responses from the very highest ranked firms AM Law 200 firms are particularly desirable for this study. In other words, we really need your participation to insure the validity of the findings.

Every precaution has been taken to ensure the confidentiality of participants. The identity of a participant and their firm is known only to Ms. Carroll. Please take the 20-25 minutes needed to complete the 25-question survey before it closes midnight, Saturday, May 1st. Your participation will increase the validity of study findings. Here is the link to the survey:

Thank you in advance for helping to build evidence to support the evidence-based practice of law librarianship! Most importantly, thank you for helping this student complete her research. You are making a wonderful contribution to research in our field.

Yvonne
REFERENCES


DiPietro, D. (2006, May). Breaking away: AM LAW 100 Firms are very profitable, but a few consistently lead the pack. What separates the leaders from the also rans? American Lawyer, 28(5), 67-.


