

Librarians and Libraries Increase Profitability: It's What You Do That Counts!

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INTRODUCTION

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 contribute to profitability, to maximize productivity and return on investment in information services to the firm. 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.

Before determining the best approach to demonstrate and calculate value, decisions have to be made about which library services and content will produce the greatest value for their sponsor. Identifying those that could be directly linked to increasing the sponsor's profitability is highly desirable.

One approach to this critical strategic decision-making is the practice of evidenced-based Librarianship (EBL). Evidence-based librarianship is a movement to migrate librarianship to

more of a scientific research base from the use of case studies and other methodological work considered to be less rigorous and of lower value.

EBL is defined as “an approach to information science that promotes the collection, interpretation, and integration of valid, important, and applicable user-reported, librarian observed, and researched-derived evidence. The best available evidence, moderated by user needs and preferences, is applied to improve the quality of professional judgments” (Wallace and Carter, 2008). Evidenced-based librarianship can be traced to medical libraries where it evolved from the modification and adaptation of medical evidenced-based practice.

There are several benefits to libraries using evidence-based management practices: evidence to support decision-making substantiates the business-like nature of libraries; the library’s credibility rises if the parent organization already uses evidence-based practices; and efficiencies can be gained through the identification and elimination of functions that do not support the library’s mission (Fisher and Robertson, 2007).

To gather evidence for law librarians at private law firms to use in the practice of evidence based librarianship, a benchmarking study of the 200 most profitable private law firms in the US (the Am Law 200) was undertaken. The purpose of the 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. The study did not seek to establish the economic value of any library characteristics.

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 has been 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, 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”. The study summarized in this paper is the first to utilize financial rank to determine if, and which, law library characteristics would have the biggest impact on private law firm profitability.

SUBJECT INDUSTRY AND SAMPLE POPULATION

The legal industry was selected as the subject for the 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 2), and knowledge workers whose primary professional function is gathering and using information or knowledge (Cortada, 1998 - attributed to Peter Drucker, 1959). Sixty percent of the current United States workforce is composed of knowledge workers (Statistical Abstracts of the United States – 2005). 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 and Milevski, 1985; Harris and Katz, 1991). Lawyers’ productivity and efficiency is greatly influenced by the confidence they have in the information they use (Curle, 2009). Secondly, financial and other details of the Am Law 200, the 200 highest grossing private law firms headquartered in the United States, are available having been compiled annually since 1984 by Incisive Media, Inc. Most private law firms are organized as partnerships which are not required to publically divulge financial data. Lastly, 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 meaning these are the “best of the best”.

The 2008 Am Law 200 was the study’s available population. After adjustments were made to account for dissolutions or mergers, the sample population for the study totaled 179. Actual survey recipients were identified using the American Association of Law Libraries and Special Libraries Association – Legal Division directories.

THEORETICAL CONSTRUCT AND FRAMEWORK

Productivity served as the theoretical construct for this study. It is important because high productivity is associated with competitive advantage which can ensure an organization’s viability and sustainable market share (Stewart, 1997). The fate of libraries is dependent on the viability of its sponsor. 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). Koenig (1999, 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.” Highly productive organizations require a steady stream of actionable information to sustain a competitive advantage (Davidow and 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)

Outcomes benchmarking, “the process of improving performance by continuously identifying, understanding, and adapting outstanding practices and processes found inside and outside the organization” (The American Productivity and Quality Center 1995, 1) was selected

as the theoretical framework for the design of this research. 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, 10). 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.

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, 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 (Bower, 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.

This body of prior research on law libraries 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 making it difficult to link survey results to anything other than these three factors. Secondly, minimal (mean, median,

maximum, minimum) 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.

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 hypotheses 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 study objective was to determine differences in Am Law library characteristics and industry standards (benchmarks) to accept or reject a study hypothesis; 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, 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.

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 difference were most likely to affect law firm profitability. A third objective was to determine the extent to which law libraries serving firms ranked higher in the Am Law 200 were different from firms ranked lower on the Am Law 200 list.

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. The hypotheses were developed from the research questions. Both are discussed in detail in the Major Findings section.

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 used 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, Revenue per Equity Partner. That data was then used to determine if there was a statistically significant relationship between the selected characteristics of Am Law libraries and law firm profitability.

Survey questions were developed by analyzing prior law library research findings that described benchmarks for library characteristics. Twenty-six law library characteristics were selected to serve as the independent variables for the study. Criteria for selection 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. Revenue per Equity Partner, the best predictor of law firm profitability, was chosen as the one dependent variable. 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.

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

- Law Library Benchmarks –2008/09 - Primary Research Group
- The AALL (American Association of Law Libraries Directory) Biennial Salary Survey and Organizational Characteristics, 2009.
- 2006 Private Law Library/Corporate Law Library SIG Operational Survey - Canadian Law Library Association
- Global Law Firm Knowledge Management Survey, 2006 - Curve Consulting

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
14. Annual budget
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

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 that were *not* an Am Law 200 firm. 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 four of the twenty-five 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. 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 1).

Table 1: Law Firm Study Participation by High (HRPEP) & Low (LRPEP) Revenue per Equity Partner

	Invited to Participate	Number of valid Surveys	Participation Percentage	Firm RPEP Range	Number of Lawyers / Firm range
HRPEP Rank 1-117	89	24	27%	\$8,928,571- \$2,407,583	240 - 558
LRPEP Rank 118-200	90	27	30%	\$2,375,000 - \$966,867	130 -936
TOTALS	179	51	28.5%		

Methodological Issues

Assumptions

It was assumed that all answers are true even though data was self-reported. Another assumption was that all Law Library Administrators participating in the survey had access to data about all firm libraries so they were able to supply aggregate answers to survey questions. Lastly, it was assumed that the law library administrator at each firm on the Am Law 200 list was a member of either the American Association of Law Libraries or the Special Libraries Association since their membership directories were used as the source of contact information for survey recipients.

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 operationalization of the research against the relevant content domain for the construct, i.e., characteristics of law libraries (Trochim, 2006). There were multiple studies of law libraries containing survey

instruments to serve as models for constructing an instrument. A content analysis was performed on this body of research on 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, and LeCompte 1999, 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.

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.

Eighty-one percent (17 out of 21) of the Am Law library characteristics with a corresponding industry standard benchmark were different (Table 2). Most of the differences in characteristics appear to be driven by budget. One such characteristic, to whom the law library administrator reports, could play a larger role in budget and other related characteristics. The industry standard for private law libraries is to report to a Library Committee or Managing Partner. Am Law libraries report to a higher organizational level within their firm, the Chief Operations Officer. 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. Remember, 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 presence of technology staff in an Am Law Library has important implications and could account for 100% of the survey respondents being involved in their firm internet and intranet website management. Industry wide, only 27% of law libraries update their firm intranet pages. Technology staff in the law library implies the Am Law library recognizes and is committed to following its firm's adoption of new technologies. It can also signal that the firm recognizes the importance of investing in technology support for information services.

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. 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.

Table 2: Differences in Am Law Libraries and Law Library Industry Standard Benchmarks		
Law Librarian Administrator & Staff	Am Law Library	Other Law Libraries
To whom the library Administrator reports	Chief Operating Officer = 44%	Managing Partner Officer = 41%
Other departments managed by library Administrator	45%	19%
Ratio Library Professional to Support/Technology staff	1.7 : 1	2.8 : 1
Average # of library professionals per firm	6	4.5
Average # of total library staff per firm	9	6.5
% Library Professionals with MLS and/or JD	100%	70%
Professional Development	100%	96%
Law Library Management		
Law firms that want to downsize the library	49%	56%
Law firms that aggressively support the library	27%	37%
Annual budget per lawyer	\$8,484	\$9,810
Average library staff billable hours	25-800	179-1275
Law libraries participate in Blogs, Wikis or Social Networks	38%	22%
Law libraries maintain & update firm internet	100%	27%
Law Library Knowledge Management Activities		
Knowledge Management Strategy	20%	61%
# of Knowledge Management Initiatives	19	14

Four of the twenty-one characteristics studied between the two groups were similar (Table 3). Three converge around the work place indicating law firms likely apply the same

staffing principles to their law libraries as to the legal services staff, i.e., law libraries must have highly experienced, well-trained library staff who can deliver high levels of service to lawyers when needed. The last, 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.

Table 3: Similarities in Am Law Libraries and Law Library Industry Standards		
Similarities		
Characteristic	Am Law Libraries	Industry Standard (IS)
Library staff-Average years of experience	≥9 years = 63%	>10 years = 60%
Support for Professional Development	100%	94%
Ratio of library staff to lawyers	1 : 42	1 : 39
Range in hourly bill rate for library staff time	\$100 - >\$200	\$100 - >\$200

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 twenty 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 vs. 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 most 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) or Managing Partner. 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 to manage firm intellectual capital
- the most profitable firms accord the same status/credibility to law library administrators as other senior firm administrators

An 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. 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. Firms in the Low Revenue per Equity Partner group reported a mean spend per library of \$465,109 while firms in the High Revenue per Equity Partner group spent an average of \$845,150 per library. Average spend per library for all survey participants was \$649,994. 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 among the AM Law firms. Each Am Law firm employs an average of nine library employees. They are typically dispersed two per firm library location.

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. The presence of technology staff in an Am Law firm library is a significant factor in Revenue per Equity Partner and rank. 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). 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. 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 Curle's 2009 survey, *Legal Professionals' Information Use Habits, Preferences, and Satisfaction*, just 75% of law firm lawyers reported they used 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. 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 the more profitable firms are willing to support library staff who seeks educational credentials.

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. Eleven practice areas were significant. 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 (Rusanow, 2006).

Participation by private law firms in knowledge management by Am Law libraries had been declining per the 2008 Am Law Library Survey. In the 2009 survey, 79% of libraries reported they participated in knowledge management activities, an increase of 4% over 2008. Significant barriers to knowledge management in a knowledge intensive industry like the legal profession remain. For example, the time-based billable hourly fee model discourages sharing tacit knowledge among attorneys though contributions to knowledge management initiatives are included in evaluating firm attorney and staff performance (Rusanow, 2006).

HYPOTHESIS TESTING

With all summarization completed, the study's hypotheses were ready to be tested. 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 a High Revenue per Equity Partner group average of \$3,377,410 vs. a Low Revenue per Equity Partner group average 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 or 81% of the independent variables were different between Am Law firm libraries and other private law firm libraries. 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. It provides researchers and practitioners the ability to view empirically the link between library characteristics and private law firm profitability. 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. We now know what law libraries serving the most profitable private law firms do. Other contributions 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.

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.

This study also contributes to law library management education by identifying library characteristics of law libraries at highly profitable law firms that impact law firm profitability. 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.

For practitioners, specific study findings provide Law Library Administrators with some important financial benchmarks: return of Investment on library budget – 1:1.64 and bottom-line contributions - each library staff generates \$295,000 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 as a way to 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

Empirical evidence provides a compelling basis for strategic decision-making by library administrators in formulating a library's value proposition for their sponsor. Using study findings and the research design (combined qualitative [descriptive] and quantitative [relational] approaches) as a foundation, a model to operationalize the value proposition for different types of libraries might be developed. The research design provides any kind of library serving for-profit organizations the means to link library characteristics to organizational profitability and productivity. Rank could be based on different measures of success unique to specific industries. The design could also be used by libraries serving non-profits, again with different relevant measures of rank, e.g., donations or endowments, number of visitors, or size of membership. 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).

A more detailed examination of characteristics related to law firm profitability identified in this study could also be undertaken. Examples of characteristics suitable for further study are practice areas most supported and to whom the Law Library Manager reports. 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 who 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 after an interval of several years.

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 the practice of evidenced-based librarianship and evidenced-based management.

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.

Prior research has established a link between information and organizational productivity and organizational productivity and libraries (Koenig, 2000). Numerous studies of law libraries have established law library industry benchmarks for various library characteristics. Results from this study are the first to clearly identify the link between certain law library characteristics and profitability. Characteristics of libraries serving highly profitable private law firms now exist. 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 also 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 identified.

It is hoped that law library Administrators can use these findings to increase their library's contribution to a firm's bottom line.

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