Determining Value: Using Rank to Identify Library Characteristics that Contribute to the Bottom Line

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Introduction

Pressure to be a performing asset impacts a library the same as any division in a for-profit organization. This need to demonstrate value, to justify the investment in information services, is nothing short of relentless. Yet there remains little agreement as to best practices for delivering library value despite an ongoing discussion about what to measure and how to communicate value. What I would have given to know which operational standards or content and services I could deploy that, with certainty, would contribute to my library parent organization's bottom line during the 15 years I managed corporate libraries!

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.[1] Structuring strategic decision-making around contributions to productivity offers a Library Administrator a strong foundation from which to successfully negotiate for firm resources. So a study was undertaken to learn which library characteristics relate to its parent organization's net profitability. For the study, a research design was developed using rank to operationalize relative measures of value.

Rankings have been successfully used to identify differences between characteristics of libraries serving higher ranked organizations and lower ranked organizations.[2] Pagell and Lusk investigated the interaction of an academic library's expenditures with the ranking of its business school and the implications for future funding. Jones used the top one third of U.S. News and World Report "Best Liberal Arts Colleges to determine a financial benchmark for library resources and staffing for the "best" colleges.

To begin, an industry segment that was ranked on the basis of a measure of 'success' to distinguish between high and low performing organizations had to be selected. The legal industry, specifically private US based law firms, proved an ideal choice as the study subject for several reasons.

First, the legal profession is inherently information-intensive, staffed primarily by knowledge workers, so it was likely libraries existed for top performers in this industry. Lawyers' productivity and efficiency is greatly influenced by the confidence they have in the information they use[3] so libraries probably have an impact on firm productivity. Productivity gains for knowledge workers such as lawyers are more likely to be produced by efficient and

effective management of information than for workers in non-information intensive industries.[4] Also financial rankings and related data of highly profitable private law firms (the Am Law 200) are readily available in the public domain. Most private law firms are organized as partnerships which are not required to publically divulge financial data. This data could be used to establish whether libraries serving the 'top performers' were different in any way from the standard benchmarks attributed to all law libraries developed from existing data collected in multiple studies over a range of years.

A study of the 200 top grossing US based private law firms (the Am Law 200) was used to collect evidence of a relationship between law libraries and private law firm profitability. 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.

Statement of the Problem

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 their firm – to operate effectively (doing the right things) and efficiently (doing things well) to maximize productivity and return on investment in information services.

At the time of the study in 2010, there was no evidence of which law library characteristics were most likely to impact firm profitability. This study would be the first to determine which characteristics positively impacted a private law firm's profitability.

Research Design

The study combined qualitative (descriptive) and quantitative (relational) approaches to learn 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 data for forming hypothesis which can then be statistically analyzed using standard quantitative research methods.[5]

In a descriptive study, data is typically gathered from surveys and other qualitative methods to inform conclusions and recommendations. 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".[6] 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, the profitability measure selected as the basis for rank. In quantitative research a hypothesis is generated then tested by statistical means. A random study sample is critical to this type of study. The research should be scalable and repeatable.

STUDY POPULATION

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

LAW FIRM PROFITABILITY RANK / MEASURE

For this study, rank, with number one being the highest, was used to determine level of profitability of a private law firm. Next a measure of success had to be selected to serve as the basis for ranking and also to be the dependent variable(s) for the purposes of statistical analysis.

Gross revenue (GR) was considered since the Am Law 200 ranking is based on gross revenue. 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) was a significant $2.06 billion.

The Revenue per Equity Partner (RPEP) measure, a net profit figure, was ultimately selected to serve as the dependent variable because it is considered the best predictor of law firm profitability.[7]. All financial data from which a dependent variable could be derived for the study was readily available as part of the Am Law 200 rankings.

The Study

Pressure to be a performing asset impacts a library the same as any division in a for-profit organization. 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.[8]

Outcomes benchmarking, "the process of improving performance by continuously identifying, understanding, and adapting outstanding practices and processes found inside and outside the organization"[9] was selected as the theoretical framework for the design of this research. A benchmarking survey could address the need to make numerous comparisons of law library characteristics across multiple private law firms with various profitability levels.

A second reason to use a 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".[10] The association of benchmarking with law libraries dates from 1998 when Gohlke[11] recommended it as an approach to use in setting law library performance standards and communicating value up the law firm management chain. A third reason was that benchmarking can demonstrate to senior management a library administrator's willingness to

conform to 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.[12]

Lastly, most of the law library characteristics selected for the study are the subject of prior law library studies which have been repeated multiple times over a period of years. Criteria for selection of the characteristics (the independent variable) 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
- The AALL (American Association of Law Libraries Directory) Biennal Salary Survey and Organizational Characteristics, 2009.
- 2005 Private Law Library/Corporate law Library SIG Operational Survey - Canadian Law Library Association
- Global Law Firm Knowledge Management Survey, 2006 - Curve Consulting

After a pilot study was used to validate the questionnaire, an online benchmarking study using Survey Monkey was conducted to determine differences in twenty-six law library characteristics of the Am Law 200 and industry standards (benchmarks) to validate a basic concept of the study; that libraries serving Am Law 200 law firms were different from the average private law firm library. Survey questions also collected sufficient data to answer the original research questions and test the study hypotheses. The questionnaire was emailed to the most senior library manager at the 179 target 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 survey 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 was $2,421,128. The mean of the adjusted sample population for all survey participants was almost exactly the same: $2,400,000.

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 (RPEP), the measure selected to represent a firm's financial performance (dependent variable).

Library characteristics chosen as study independent variables were assigned one of three categories:

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

RESEARCH QUESTIONS / HYPOTHESES

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 each of the research questions and/or to test each hypothesis.

Research questions for the 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 the 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 a 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).

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. 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 in the analysis.[13]

METHODOLOGICAL ISSUES

Assumptions

It was assumed that all survey answers were 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.

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.[14] 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".[15] 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.[16] 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.

RESULTS

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 (Table 1).

Table 1 *High Revenue per Equity Partner (HRPEP) Law Firms vs. Low Revenue per Equity Partner (LRPEP) Law Firms*		
	HRPEP	LRPEP
Mean RPEP	$3,377,410	$1,541,866
Number	N = 24	N = 27
RPEP Rank Indicator	>$2.4 million	<$2.4 million

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, 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 (Table 2). 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 2 *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%**		

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 a corresponding industry standard benchmark were different. The differences are summarized in Table 3. 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 in demonstrating value. 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 so allocate accordingly.[17]

Table 3		
Differences in Am Law Libraries and Law Library Industry Standard Benchmarks		
Characteristic	Am Law Library	Other Law Libraries
Law Librarian Admin & Staff		
To whom the library Administrator reports	Chief Operating Officer = 44%	Managing Partner = 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
Avg # of 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
Average Firm Library Budget	$3,880,227	$1,540,441
Law libraries maintain & update firm internet	100%	86%
Law Library participates in blogs, wikis or social networks	38%	22%
Number of library locations per firm	6	3
Law Library Knowledge Management Activities		
Knowledge Management Strategy	20%	61%
# of Knowledge Management Initiatives	19	14

Only 19% of the Am Law library characteristics and industry standard benchmarks are similar. Three are principally related to stable, high quality service levels (Table 4) 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 4		
Similarities in Am Law Libraries and Law Library Industry Standards		
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

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, was conducted 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, the 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?".

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 (library characteristic) was first tested for significance in determining Revenue per Equity Partner rank, a measure of profitability and the study dependent variable. If an independent variable was found to be significant, further testing between and within the HRPEP and LRPEP groups was conducted.

In answer to Research Questions 2 (Q2), "To what extent are law library characteristics a factor in Revenue per Equity Partner rank, a measure of law firm profitability?" and 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?", six of the 26 independent variables were identified as being a significant factor in Revenue per Equity Partner rank. The study successfully proves specific characteristics are linked to law firm profitability (Table 5.). The remaining independent variables were non-significant.

Table 5		
Characteristics of Am Law Libraries Significantly Affecting ***Revenue per Equity Partner and Rank***		
Significant Differences in Revenue Per Equity Partner		
Characteristic	HRPEP Firm Revenue	LRPEP Firm Revenue
To who the library Administrator reports	CIO / $3,125,937	COO / $2,077,274
Number of Library staff per library – Regression @ $295,000 of RPEP per Library FTE (Accounts for 24% of the variance	$3,410,296	$1,409,245
Library budget per library ($1.00 of library budget generates $1.64 of Revenue per Equity Partner)	$845,150	$465,109
Support for Professional Development	$3,410,852	$2,100,155
Range in hourly bill rate for library staff time	$3,217,000 when use >$200/hr	$2,057,000 – less likely to bill @ >$200/hr
Practice areas most often supported:	Business Law: $2,831,000 White Collar Crime: $3,002,000	Business Law: $2,024,000 White Collar Crime: $1,987,000

Summary

Law libraries serving the Am Law 200 private law firms, the top .42% most profitable firms are different from the standard law library. Of the seventeen law library characteristics (independent variables) which proved different were driven by budget. Am Law libraries report to a higher level within their firms which could account for their budgets averaging 151% higher than other private law firm libraries. Other budget related differences attributed to Am Law firm libraries include: twice the libraries, 40% more library staff firm wide, 33% more professionals on staff, and a smaller ratio of support and technology staff to professionals (1.68 vs. 2.8:1).

Statistical analysis also show firms in the High Revenue per Equity (HREP) group are different from firms in the Low Revenue per Equity (LREP) in reporting structure, number of employees per library, investments in professional development, bill a higher rate for library staff hours, have almost double the budget, and the practice areas supported.

A 119% difference ($1,835,544) in Revenue per Equity partner (RPEP) exists between the High Revenue per Equity Partner group RPEP of $3,377,410 vs. the Low Revenue per Equity Partner group RPEP of $1,541,866.

Other significant financial data identified in this study include the following:
- $1.00 of library budget generates $1.64 of Revenue per Equity Partner
- Each full time library employee generates $295,000 of RPEP for its parent

The research design demonstrates how rank can be used to operationalize relative measures of value. This study can be replicated since potentially any rank could be used, e.g., a quality ranking such as a "Best" Museums which uses a numerical 'success' measure such as annual visits, membership, or revenue including endowments, gifts and donations as a way to distinguish high performing from lower performing organizations. The annual Fortune 500, a ranking of the 500 most profitable US companies published each April by Fortune magazine is another potential source. Additionally libraries serving a specific industry could be examined since the Fortune 500 is also segmented by industries.

Knowing which library characteristics contribute to a parent's bottom line positions a Library Administrator to adopt operational processes, services, and content that prove its value.

Endnotes

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