2023

Institute for Museum and Library Services LG-96-18-0240-18

Furthering Our Understanding of the Economic Value of Public

Library Services (META 2)

Principal Investigator
Dr. Jennifer Arns

Co-Principal Investigator
Dr. Clayton Copeland

Principal Contributors

Dr. Robert Williams
Dr. Karen Miller
Dr. Joey Von Nessen
Ms. Abigail Cripe

UNIVERSITY OF
SOUTH CAROLINA

Table of Contents

Acknowledgments

Introduction

The META 2 project described in this report is designed to update and respond to the findings summarized in the original META 1 project described in the report *Assessing the Value of Public Library Services: A Review of the Literature and Meta-Analysis* and funded by the IMLS grant RE-04-08-0047. Both projects focus on two research questions.

- RQ1. Is there new, reliable, and mounting evidence that public libraries contribute to the economic prosperity of the communities they serve?

- RQ2. How might these benefits be accurately characterized and communicated?

META 2 approaches these questions from more than one perspective. The first chapter looks briefly at public libraries from an economic perspective and reviews techniques that have been used recently to augment traditional images with measurements that characterize contributions from social, monetary, and economic perspectives. The following chapters provide a detailed and scholarly description of the steps META 2 takes to arrive at a new conclusion: that even in varying circumstances, American communities may typically expect to receive substantial benefits for every dollar they spend on public library services. The third chapter approaches this topic from the users' viewpoint.

The research that continues to propel both META projects begins with the premise that there are many reasons to measure organizational performance. They typically begin with the basic question, "Is my organization doing what it is intended to do?" Beyond this point, performance measurements can be used to guide the allocation of funds, motivate and direct employees, identify needs for improvement, and foster organizational culture. In the public sphere, perhaps even more importantly, performance measures are a powerful tool for communicating programmatic value and accomplishments to both stakeholders and constituents.

As noted before, the value of this type of dialog and the measurements needed to sustain it have been recurring themes in public library discussions for at least two decades (Durrance & Fisher, 2005; McCook, 2000, 2004; Usherwood, 1999), including those that centered on making the case for the public library in economic terms (Holt, 1998; Morris, Sumsion, & Hawkins, 2002; Elliott, 2005; Imholz & Arns, 2007). Arguments made by Glen Holt and Donald Elliott figured prominently in these earlier discussions. Forums hosted by The Americans for Libraries Council also pointed to the importance of this dialog, as did the Urban Libraries Council, OCLC, State Librarians, and many practitioners. In response, there were multiple examples of studies and prominent discourse that used a variety of methodologies to picture of the contributions that public libraries make in American communities.

At the time that META 1 was initiated, much less progress had been made in systematically analyzing and consolidating the results of these efforts (Imholz & Arns, 2007), and as a consequence, there remained much to be learned concerning: 1) the consistency of the benefit estimates, 2) their predictable magnitude, and 3) the contextual factors that figured in their variation. It was also, if not a waste of scholarly resources, almost impossible to build a cumulative research agenda or make significant strides toward more comprehensive assessments without this

type of information (Wolf, 1986). META 1 preliminarily addressed this situation with results suggesting mounting evidence concerning the positive contributions that public libraries make to the prosperity and well-being of their communities and 2) that Americans may typically expect to receive benefits in the range of $5 to $6 for every $1 they spend on public library services.

META 2 relies on similar constructs, models, and theoretical perspectives, including . the need to think in terms of program evaluation models that differentiate "doing well" and "doing" good. The first of these has to do with efficiency – are we things in a manner that maximizes our resources? This type of measurement is usually straightforward and can be answered, for example, with the use of internal benchmarks. "Doing good" is more difficult to observe because it refers to outcomes, i.e. a changes in the state of others. Both META projects focus on the latter, and META 2 extends this discussion with a short glances at the changes that configured public library use and services since the beginning of the covid epidemic and public library users' viewpoints.

Phase 1: The Research Perspective

Initial searches for literature related to public library value published between January 2013 and April 2019 were conducted in Google, Google Scholar, and a broad range of academic databases. Qualitative studies of public library value were newly added. As in the case of META 1, several economic terms were initially used to capture economic variables. The first, "willingness to pay" and "WTP" typically refer to the maximum price a customer is willing to pay for a product or service. "Willingness to accept" or "WTA" typically refer to the minimum monetary amount that a person is willing to accept to sell a good or service. "Contingent valuation" or "CVA" is a survey method typically used to determine the economic value of a nonmarket goods and services. "ROI" or "return on investment" compares the value of an investment to the costs associated with the investment. Other terms included, but were not limited to, "library", "public library," "value," "economic value," "outcome", and "Impact". Citations within identified documents were also reviewed for additional

studies that might be pertinent to these topics. The results of the Phase One document searches appear in the *META 2 Research Bibliography*.

Each document included in the Research Bibliography was next reviewed for suitability for subsequent analysis using the following initial criteria: 1) the document presented a research study related to public library value, 2) the document included a description of the methodology used to develop measurements of public library value, and 3) the results of the study were sufficiently standardized and detailed to be comparable to other studies. Those documents identified as research studies of public library value were tracked in the Microsoft Excel META 2 Research Study database containing the following fields: full citation, data collection date(s), geographical location, study methodology, and study results.

Eighty-one (81) research studies related to public library valuation published between January 2013 and April 2019 were identified and added to the META 2 Research Study Database between February and April 2019. The list of studies appears as section one in the comprehensive META 2 Research Bibliography. The content of those studies is summarized in the META 2 Research Study Database. Summaries of the research studies by their primary methodological approach appear in Table 1 and Figure 1, below:

Research Studies Classified by Methodology	Count
Contingent Valuation	14
Economic Model	7
Cost-Benefit	2
ROI	16
SROI	3
Qualitative	26
Perceived Outcomes	5
Other	8
Total	81

Table 1: META 2 Research Studies by Methodology
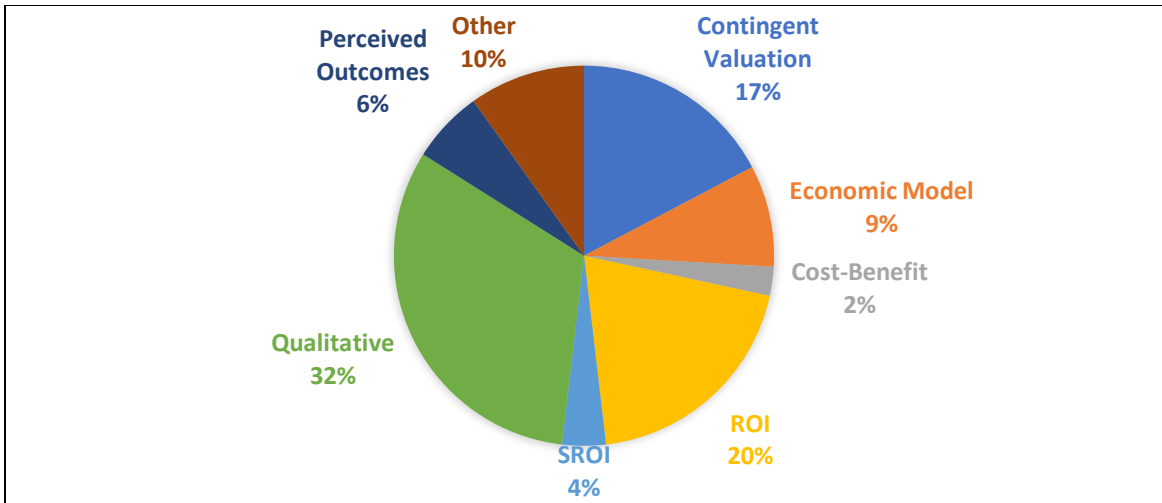
Figure 1: META 2 Research Studies by Methodology (Percent)

Contingent Valuation Studies

Only two of the fourteen contingent valuation (CV) studies were conducted in the US. Six CV studies are from the Czech Republic, two are from Canada, and the remaining studies are from Denmark, England, Japan, and Sri Lanka. While the majority of contingent valuation studies relied on the willingness to pay (WTP) methodology, a variety of approaches were used, as documented in Table 2 and Figure 2, below.

Contingent Valuation Research Study Methodologies	Count
WTP	8
Alternative Costs (Market Costs)	2
WTP, WTA	1
WTP, WTA, Tax Increase or Decrease	1
WTP, Cost Savings	1
Time Use	1
Total	14

Table 2: Contingent Valuation Research Study Methodologies
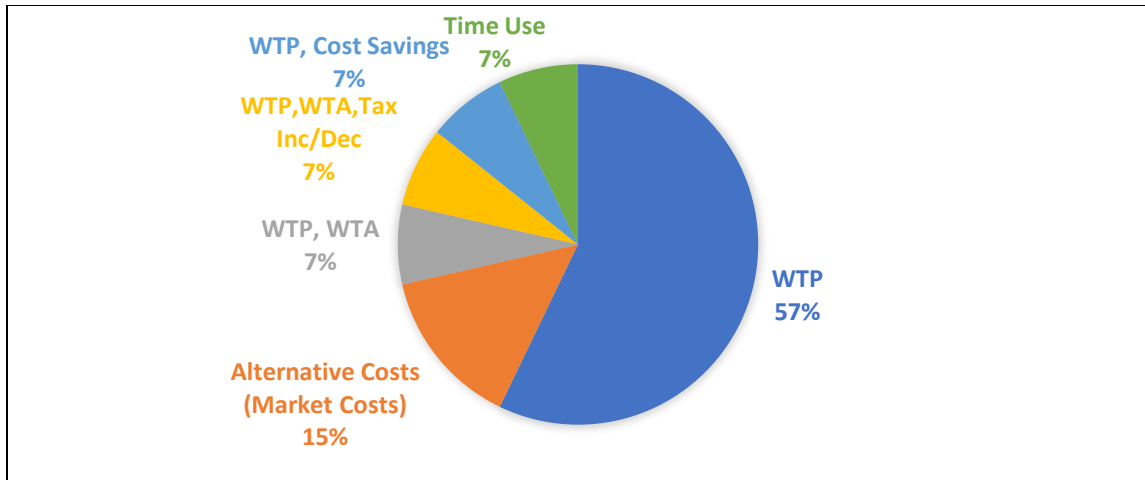
Figure 2: Contingent Valuation Research Study Methodologies (Percent)

In the first of the two American CV studies, McIntosh (2013) completed a phone survey of 557 Minnesota households. The survey included cost savings questions and a WTP question asking respondents to consider making a voluntary donation to support library services (p. 119). Both users and non-users were included in the households surveyed; however, separate results were not reported for non-users. The WTP question produced an average response of $36 per year. Comparing the cost savings result of $310 million total savings to the WTP result.

The second American CV study was conducted by the Research Center Nashville Area Chamber of Commerce (2017). That study of the Williamson County Public Library. Based on analysis of 1,543 responses to 25,203 emailed surveys, the researchers estimated that the direct benefits of the library produced an ROI of $4.02 for every $1.00 of expenditure (p. 22). The researchers also concluded that "The Library leads the way across communities and county in offering learning and experiential opportunities for students, jobseekers, entrepreneurs, artisans and performers to advance and diversify their livelihood and craft in viable economic ways" (p. 2).

One-half of the international studies employed variations in, or alternatives to, traditional WTP methodology. The median ROI reported in the five international studies was 1.8 and the mean ROI was 2.7 with a standard deviation of 1.9. Indirect benefits were quantified by Fujiwara, Lawton, and Mourato (2015), who found a 1.4% positive association between regular library use and responses indicating good general health. Using reduced general practitioner visits as the proxy for the indirect

benefit of library use, the researchers projected annual individual savings of £1.32 and aggregate National Health Service savings of £27.5 million per year (p. 7).

Economic Model Studies

Unlike the CV studies, where 86% of the studies were conducted outside the US, six or 86% of the economic model studies were of American public library systems. Similar to the CV studies, a wide variety of methodologies were used in the economic model studies, including: a US Census regional economic multiplier (Fleeter 2016); mixed CV, University of South Carolina economic multiplier, and RIMS II input-output economic model (Lal, 2013); IMPLAN input-output economic model (Jarrett, 2017; *San Francisco*, 2015); mixed CV survey and REMI input-output modeling (Haas Center, 2013; Nashville Area Chamber of Commerce, 2016); and mixed cost-benefit and Cadence Economics computable general equilibrium (CGE) model (SGS Economics and Planning, 2018).

The direct ROI was reported in four of the seven studies, ranging from a low of 3.39, where 3.39 is the mid-point of the ROI range between 3.09 and 3.69 (Lal, 2013), to a high of 4.64 (Jarrett, 2017) The median ROI was 3.39 and the mean was 3.8 with a standard deviation of .74. Additionally, the San Francisco Public Library (2015) study of branch capital improvements over a 14-year period found that the direct ROI ranged from 5.19 to 9.11 (p. 9). Contrastingly, Lal (2013) reported a .8 ROI for construction benefits (p. vi.).

The total ROI was reported in four of the seven studies, ranging from a low of 2.86 (Fleeter, 2016) to a high of 10.18 (Haas Center, 2018). The total ROI of 8.45 reported by the Nashville Area Chamber of Commerce (2016) included a separately calculated direct ROI of 4.06 for Nashville Public Library Foundation expenditures that supplement the public funding of the library system (n.p.). The median total ROI of the four studies was 7.11 and the mean total ROI was 6.8 with a standard deviation of 3.2. When the Fleeter (2016) low total ROI of 2.86, based on a regional economic multiplier, was removed from the sample the median of the remaining three studies was 8.45, the mean was 8.13, and the standard deviation was 2.22.

Three economic model studies did not include a total ROI calculation, but those researchers did report indirect economic benefits arising from public library investment. Jarrett (2017, p. 4) reported

indirect economic activity of $976 million and support for more than 11,000 Texas jobs. The San Francisco (2015, p. 54) study identified $330 million indirect economic benefits, the equivalent of 80 jobs (mix of full- and part-time) created during the 14 years of capital investments, and a projected increase of additional 418 full- and part-time jobs over the course of the 20-year period beginning 2015. SGS Economics and Planning (2018, p. 8) reported indirect benefits of $328 million AUD in gross regional economic product and support for 500 jobs in Victoria, Australia.

Cost-Benefit Studies

The two cost-benefit studies in the META 2 Research Database relied on the Total Economic Value (TEV) approach to cost-benefit analysis. Obal (2015) reported a total cost-benefit ratio of 5.14 for the Marikina, Philippines library and Tessler (2013) reported a total cost-benefit ratio of 4.9 for London, England libraries (an alternate estimate excluding 5.9 million pounds in donations due to their opportunity costs yielded a cost-benefit ratio of 5.1).

Return on Investment (ROI) Studies

The return on investment economic valuation methodology was applied in sixteen of the studies within the META 2 research database. One of those studies focused on the economic value of publicly funded collaborations between local businesses and the British Library. The British Library's Business & IP Centre hubs funded during the collaboration yielded a direct ROI of 4.5, generated £38 million gross value added, and created nearly 1,700 new businesses and more than 4,200 jobs between April 2013 and March 2015 (Department for Digital, Culture, Media & Sport, 2015, n.p.). Of the remaining studies, eleven analyzed Canadian libraries and four analyzed American libraries.

The eleven Canadian ROI studies were based on the approach developed by the Martin Prosperity Institute (2013) for their economic valuation of the Toronto Public Library. That approach combined market substitution for direct benefit calculations and economic multipliers ranging from 1.4 to 2.0 for indirect benefit calculations (pp. 8-11). The mid-point total ROI for the ten Canadian studies reporting a total ROI ranged from a low of 5.16 (Ottawa Public Library, 2016; the only study to vary the Martin Prosperity Institute approach) to a high of 7.85 (Newmarket Public Library, 2016). Of the ten Canadian studies reporting a total ROI, the mean mid-point total ROI was 6.23 and the median

was 5.76. With a standard deviation of 0.95, the Martin Prosperity Institute approach appeared to produce reasonably consistent total ROI results.

Two of the four American studies did not report a total ROI. Instead, a direct ROI of 3.89 was reported by the Fairfax County Public Library (2019) and a direct ROI ranging from 2.50 to 5.17 was reported for Santa Clara, California public libraries (Berk & Associates, 2013). Howard Fleeter & Associates (2016) reported a direct ROI of 3.89 and a total ROI of 5.48 for Ohio public libraries. The total ROI of the Norfolk, Virginia public library was reported to range from 3.33 to 5.23 (Pennecke, 2018). Overall, of the twelve ROI studies reporting a total ROI, the mean was 6.01 with a standard deviation of 1.04 and the median was 5.65. The following unquantified indirect library benefits were also reported: a safe meeting place, improvement in critical thinking skills and computer skills, and the preservation of local culture (Pennecke, 2018); and partnerships with schools to promote literacy, education, and the "No Kid Hungry" program (Fairfax County Public Library, 2019).

Other Methodologies

Eight of the studies within the META 2 Research Study Database were coded under the "Other Methodology" category. Two of the studies within the "Other" category provided comprehensive literature reviews of public library valuation literature. In the first of those studies, the Arts Council England (2004) reviewed 2009 through 2013 "Anglo" and European literature in consultation with library stakeholders and a project steering group. The methodologies applied within the remaining six studies included correlation (2 studies), economies of scale, regression panels, regression paths, and logistic regression.

Analysis

The *direct* ROI of seven (7) economic research studies reviewed during the original META 1 project ranged widely between 2.70 and 13.50 with a mean direct benefit per dollar expenditure of 6.59 and a median of 5.37 (Arns, 2013, p. 62). In comparison, fourteen (14) of the economic valuation studies reviewed during Phase One of the META 2 project reported a direct ROI. The mean direct ROI of those studies was 3.52 with a standard deviation of 1.56 and a median of 3.61. While providing continuing evidence of public library contributions to economic prosperity, the META 2 mean was 3.07

direct ROI below the META 1 direct ROI, and the META 2 median was 1.76 direct ROI below the META median direct ROI.

Similar to the studies reviewed during META 1, the direct ROI calculations ranged widely between 1.40 using the CV methodology and 6.51 using the standard ROI methodology. The second highest ROI (6.03) was reported by a CV study. As illustrated in Table 3 and Figure 3, below, the CV studies reported the broadest range in direct valuations while the economic model studies were the most consistent.

	CV	Economic Model	ROI	SROI
N	6	4	3	1
Mean	2.9	3.85	4.75	2.25
Standard Deviation	1.81	0.74	1.53	-
Median	2.18	3.85	3.89	2.25

Table 3: Direct Return on Investment by Methodology, META 2 Studies
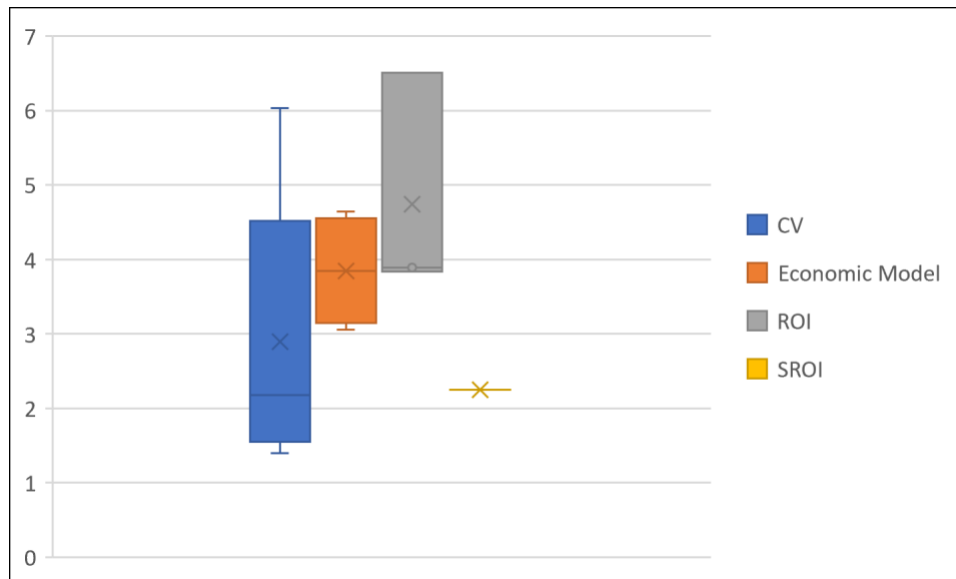
Figure 3: Direct Return on Investment by Methodology, META 2 Studies

As with the analysis of META 2 direct ROI results, META 2 total ROI results are lower than those found during the META 1 project. Of the twenty META 2 studies reporting a total ROI, the mean was 5.75 with a standard deviation of 1.93. The META 2 mean total ROI was 3.01 total ROI below the mean of the twelve META 1 studies (Arns, 2013, p. 62). However, the median META 2 total ROI was 5.63— only .14 total ROI lower than the META 1 median total ROI (p. 62).

As illustrated in Table 4 and Figure 4, below, the total ROI varied between economic valuation methodologies. None of the fourteen (14) CV studies reported a total ROI. Overall, the total ROI valuations ranged from a low of 1.36 in an SROI study (James, 2013), to a high of 10.18 in an economic model study (Haas Center, 2013). The twelve studies applying the ROI methodology produced the most consistent total ROI results, ranging from a low of 5.16 (Ottawa Public Library, 2016) to a high of 7.85 (Newmarket Public Library, 2016).

	Economic Model	Cost-Benefit	ROI	SROI
N	4	2	12	2
Mean	6.82	5.02	6.01	2.81
Standard Deviation	3.20	0.17	1.04	2.04
Median	7.11	5.02	5.65	2.81

Table 4: Total Return on Investment by Methodology, META 2 Studies
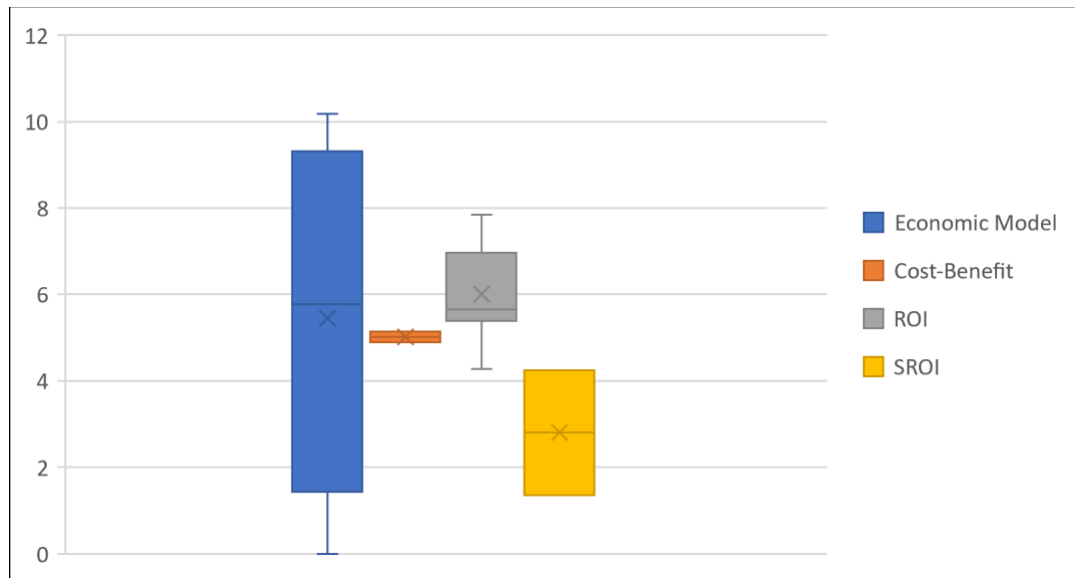
Figure 4: Total Return on Investment (ROI) Boxplots by Methodology

As noted above, the original META 1 project concluded that the typical total return on investment in public libraries ranged between $5.00 and $6.00 for each $1.00 invested (Arns, 2013, p. 65). When indirect returns on investment are considered, the total returns on public library investment reported by the economic research studies reviewed during Phase One of the META 2 project largely validate the META 1 findings. However, while the META 2 total ROI mean of 5.75 is well within the overall META 1 project conclusion that public libraries return between $5.00 and $6.00 per $1.00 invested and the median total ROIs remain largely unchanged between META 1 and META 2, the mean META 2 total ROI was thirty-four percent (34%) lower than the mean META 1 total ROI.

Return on Investment and Library Size

In their study of the "operational efficiency" of public libraries in the Czech Republic, Linhartová and Stejskal (2017) concluded that "the size of the library, according to its registered users, does not affect the value of B/C [benefit/cost] value. The efficiency of the library is not affected by its size" (p. 96). Providing additional evidence that the relationship between size and economic value may be minimal, there was little variation in total return on investment among the five ROI studies reporting population sizes (see Table 5 and Figure 5 below).

Total ROI	Population (Thousands)	Citation
6.68	377	London Public Library (2015)
5.36	430	Vancouver Island Regional Library (2016)
5.59	536	Hamilton Public Library (2017)
5.63	2,791	Martin Prosperity Institute (2013)
5.48	11,529	Howard Fleeter & Associates (2016)

Table 5: Total Return on Investment (ROI) By Population

Figure 5: Total Return on Investment (ROI) By Population

Non-Users and Library Value

The majority of economic valuation studies reviewed during META 2 Phase 1 focused on the direct and indirect benefits accruing from public library *use*. However, as described in the *Results* section above, the two cost-benefit studies reviewed during Phase 1 adopted the "total economic

value" (TEV) methodology that includes use benefits, including an option value, and non-use benefits, including bequest and existence values. The *option* to use libraries at some point in the future has economic value because the educational, cultural, and informational aspects of public libraries are such that even current non-users benefit from public funding (Getz, 1979, pp. 152-153; Van House, 1983, pp. 28). For example, forty percent (40%) of the total WTP in the Copenhagen Economics (2015) CV study was attributable to non-user option value (pp. 9-10). *Bequest* value is the "value which the current generation places on preserving the Library for the benefit of future generations" (Tessler, 2013, p. 46). One example of bequest value was found in the James (2013) SROI study: "Non-users place more importance in some of the indirect benefits of libraries, namely their role in maintaining and capturing local history for future generations . . . ." (p. 1). *Existence* value is "attached to the existence of the Library irrespective of whether a person ever visits it or not. For example, people may value the existence of the Library in the present even if they have no intention of visiting it" (Tessler, 2013, p.1). While non-use value consists of option, bequest, and existence components, "it may be difficult to disentangle one from the other" (p. 1), and neither of the cost-benefit studies adopting the TEV methodology distinguished between those values. In the first of the two costs-benefit TEV studies, Tessler (2013) arrived at an estimate of £412.8 million in British Library non-use benefits through a WTP survey of non-users (p. 49). In the second cost-benefit TEV study, Obal (2015) quantified average non-use benefits of 1,818 pesos based on "actual pledges or donations" to the Marikina City Library" (p. 4).

In addition to the two cost-benefit studies, five of the CV studies surveyed non-users. The McIntosh (2013) and Kaluthanthri and Edirisinghe (2016) studies did not separately quantify non-use benefits. The remaining three CV studies reported relatively large non-user valuations. As mentioned above, forty percent of the final WTP was attributed to non-users in the Copenhagen Economics study (2013, pp. 9-10). Fujiwara, Lawton, and Mourato (2015) concluded that the national average user WTP was £365.3 million per year versus a national average of £358.1 million per year for non-users (p. 6). Finally, Oliphant (2014) found that the average annual WTP was $29.59 for library users versus $26.95 per year on average for non-users (p. 354). In general, these studies demonstrate the validity of the option, bequest, and existence value constructs operationalized as non-use value.

While economic value can accrue to non-users of public libraries, at least four studies investigating library services to disadvantaged groups raised concerns about the inequitable distribution of library benefits arising from non-use. Johnson and Griffis (2014) found disproportionate library use by socially accepted community members and suggested that those rural libraries should increase efforts to include all community members rather than catering to middle-class users (p. 188). Gómez-Hernández, Hernández-Pedreño, and Romero-Sánchez (2017) concluded that Murcia, Spain libraries served only 28.6% of the vulnerable population and urged libraries to attract "a greater proportion of the citizenry at risk of exclusion" (p. 31). Neumann and Moland (2019, p. 130) concluded that "only 8% of low-income families reported to have taken advantage of library resources." Meyer's (2018) study of Iowa public libraries concluded that there was a negative correlation between library use and poverty compared to a small positive correlation between higher library use and lower poverty (p. 58). Taken together, the results of those studies challenge libraries to strategically increase their efforts to serve diverse, disadvantaged community members. Studies such as that conducted in Philadelphia, Pennsylvania (Morgan et al., 2017) affirm that public libraries offer "hope for great integration and tolerance" while "actively address[ing] the social determinants of health, [and] offering educational, social, and cultural programming" (p. 2). However, the equitable allocation of those public library benefits appears to require increased efforts to extend services to disadvantaged community members. While producing nonquantifiable social benefits, increasing services to disadvantaged non-users would also increase public library economic and social value.

Results

The public library economic valuation studies reviewed during Phase One of the META 2 project suggest new and mounting support for the conclusion that public libraries contribute to the economic prosperity of their communities while supporting the META 1 conclusion that public library total ROI tends to range between $5.00 and $6.00. The small unexplained decline in the total ROI mean between META 1 and META 2 studies, however, is noteworthy and amenable to further interpretation. The Phase One studies and their analysis also raise questions regarding the equitable distribution of public library value.

2017

During data construction, the South Carolina cost-benefit algorithm was applied to the IMLS Public Libraries Survey (PLS) state summary datasets for 2008 through 2017. Replication of the META 1 SC algorithm was complete with one exception—the new IMLS PLS local/other electronic collection field was substituted for the no longer supported local database field beginning with the 2015 PLS file. To complete data construction, select demographic data provided by the USDA Rural Atlas (2019), including poverty indicators, were added to the 2017 IMLS State Summary file.

The total ROIs produced by applying the SC cost-benefit algorithm to the IMLS PLS State Summary files from 2008 through 2017 appear by region in Table 6 and Figure 6, below. As shown in Table 6, the META 1 project reported 2008 through 2011 ROIs, while the current META 2 project replicated the META 1 analysis for 2012 through 2017. While total ROIs tended to increase after the "Great Recession" of 2008, the total ROI showed a decrease of $0.57 between 2011 and 2017. The largest decreases in total ROI between 2011 and 2017 were in the Rocky Mountain and Southeast regions, with respective declines of $1.03 (16.1%) and $0.99 (17%). The smallest total ROI decline was in the Mid-East region, which decreased by $0.35 (6.7%).

	META 1					META 2					
Region	Total ROI 2008	Total ROI 2009	Total ROI 2010	Total ROI 2011		Total ROI 2012	Total ROI 2013	Total ROI 2014	Total ROI 2015	Total ROI 2016	Total ROI 2017
New England	$5.62	$6.25	$6.50	$6.39		$6.34	$6.16	$6.10	$5.36	$5.60	$5.74
Mid-East	$4.80	$5.31	$5.73	$5.23		$5.14	$5.30	$5.22	$5.16	$5.36	$4.88
Great Lakes	$5.18	$5.72	$5.62	$5.62		$5.69	$5.76	$5.48	$5.31	$5.42	$5.14
Plains	$5.64	$6.14	$6.40	$6.31		$6.41	$6.09	$6.01	$5.73	$5.74	$5.63
Southeast	$4.76	$5.56	$5.65	$5.83		$5.83	$5.69	$5.50	$5.29	$5.12	$4.84
Southwest	$5.07	$5.63	$5.94	$6.03		$5.63	$5.99	$5.73	$5.57	$5.46	$5.44
Rocky Mountains	$5.65	$6.57	$6.55	$6.39		$6.29	$6.08	$5.95	$5.94	$5.68	$5.36
Far West	$4.81	$5.55	$5.61	$5.35		$5.43	$5.57	$5.22	$5.15	$4.76	$4.81
Grand Total	**$5.02**	**$5.69**	**$5.79**	**$5.63**		**$5.67**	**$5.68**	**$5.48**	**$5.31**	**$5.26**	**$5.06**

Table 6: Total Return on Investment, 2008 – 2017
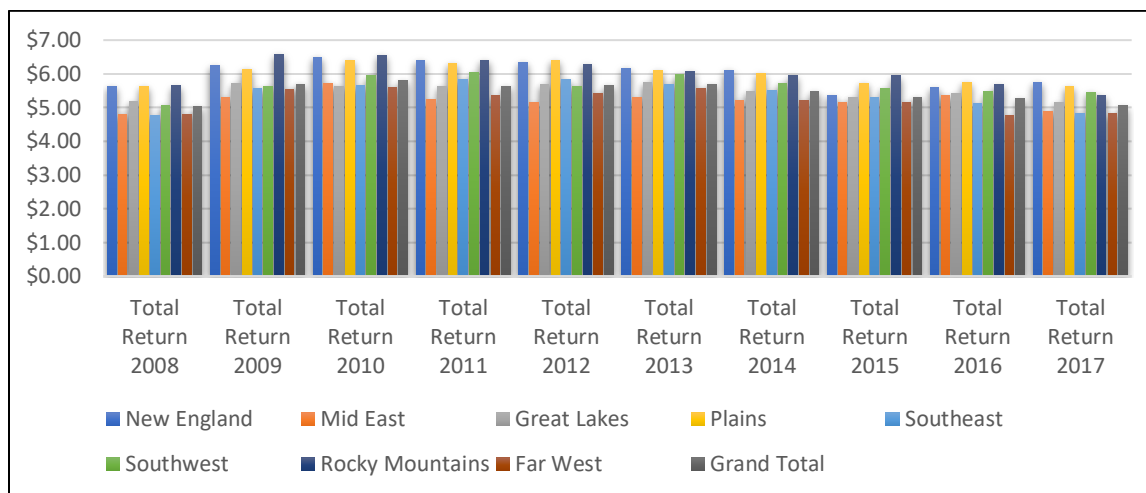
Figure 6: Total Return on Investment 2008 – 2017

The current, conservative SC cost-benefit formula did not include a valuation for WIFI use. In fact, prior to the 2014 Public Libraries Survey (PLS), the IMLS asked libraries to exclude nonlibrary WIFI access counts from the number of library computer users. However, a new PLS field was added in the 2014 PLS for the total annual wireless sessions provided by library wireless service. Only four states did not report wireless sessions in the 2014 PLS. All states reported wireless sessions in the 2015

through 2016 surveys. While the overall numbers of library computer sessions decreased by 24% between 2012 and 2017, the numbers of wireless sessions have steadily increased since their first report in 2014.

When wireless and in-library computer sessions are combined, the overall number of computer users increased by 74% between 2012 and 2017. Valuing WIFI users at the SC formula in-house computer use rate ($3.75 per use) resulted in an overall higher total return on investment between 2014 and 2017, as shown in Table 7 and Figure 7, below. When WIFI usage is considered, between the end of the META 1 project in 2011 and 2017, the total ROI decrease for all US public libraries was $0.48 or 8.5%. With WIFI usage, the largest decreases in total ROI between 2011 and 2017 were in the Rocky Mountain and Southeast regions, with respective declines of $0.98 (15.3%) and $0.89 (15.2%). The smallest decline was in the Mid-East region, which decreased by $0.28 or 5.3% between 2011 and 2017.

	Total Return 2014	Total Return 2015	Total Return 2016	Total Return 2017
Without WIFI	$5.48	$5.31	$5.26	$5.06
With WIFI	$5.53	$5.37	$5.33	$5.15
Increase With WIFI	$0.05	$0.06	$0.07	$0.09

Table 7: Total Return Without and With WIFI Usage Value, 2014–2017
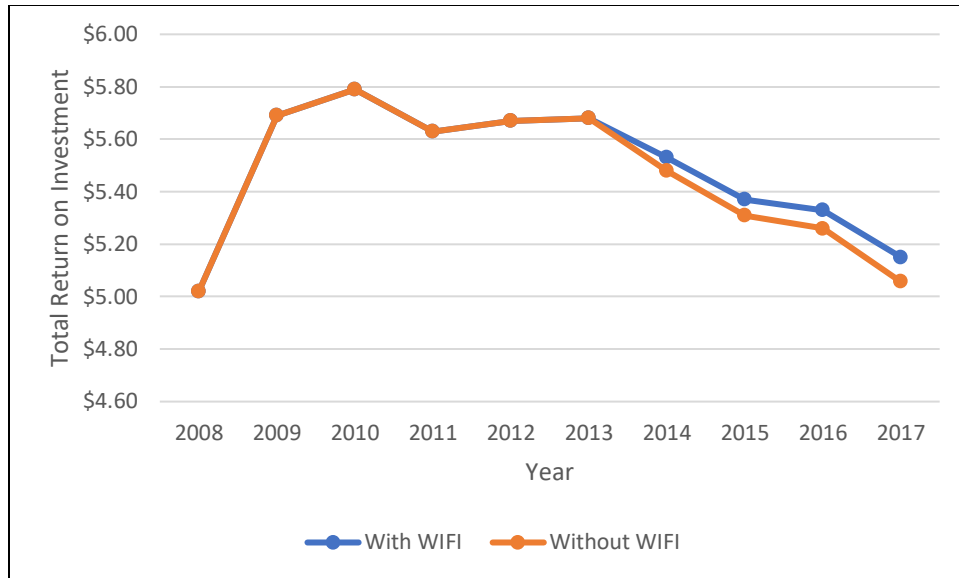
Figure 7: Total Return Without and With WIFI Usage Value, 2008–2017

The detailed data used to perform the fixed effects meta-analysis were generated by applying the University of South Carolina (SC) cost-benefit algorithm (described in Barron et al. 2005) to the 2017 IMLS Public Libraries Survey State Summary file. The states were sorted into regions using the IMLS geographic region variable (OBEREG), and Excel software was used to generate the means and standard deviations for each region. The side-by-side box plots shown in Figure 8 illustrate the variability in total return both within and between the regions. The median return is represented by the middle line in the boxes. Each box depicts the range between the 1st and 3rd quartiles, representing 50% of all libraries within the region. The upper and lower tails of the boxes are also indicators of the variability in total return within each region. Unchanged since the META 1 analysis of the 2011 IMLS State Summary file, New England libraries generally present the highest total return. The Rocky Mountain region median is higher than the New England median, while the Mid-East libraries appear to have the lowest median and Southwest the least variability.
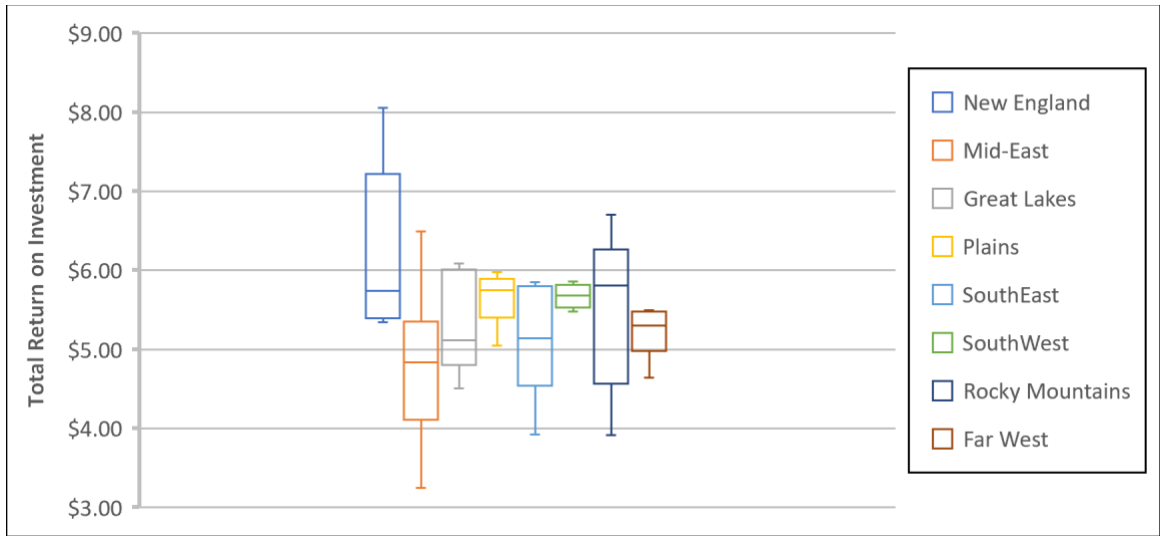
Figure 8: Variability Within and Between Regions

The 2017 total return means and standard deviations for each region shown in Table 8 confirm the visual inspection of the box plots. New England libraries had the highest mean return at $6.15 ($6.21 with WIFI usage). Mid-Eastern libraries had the lowest mean total return at $4.73 ($4.80 with WIFI usage). The Southwest libraries have the lowest variability in total return.

		Without WIFI			With WIFI	
Region	N (# States)	Mean	Standard Deviation		Mean	Standard Deviation
New England	6	$6.15	1.05		$6.21	1.08
Mid-East	6	$4.73	1.02		$4.80	1.05
Great Lakes	5	$5.24	0.65		$5.35	0.66
Plains	7	$5.52	0.31		$5.64	0.32
Southeast	12	$4.98	0.62		$5.09	0.67
Southwest	4	$5.51	0.11		$5.67	0.16
Rocky Mountains	5	$5.43	1.01		$5.49	1.03
Far West	6	$5.13	0.30		$5.22	0.32

Table 8: 2017 Mean Total Returns by Region

The subsequent analysis using Comprehensive Meta-Analysis (V2) software treated each region as a separate study. The effect size of interest was defined as the mean total return. The fixed effects meta-analysis model produced a weighted average of the effect without assuming homogeneity of effect (Borenstein et al. 2009, 85). A fixed effects model is appropriately used where: (1) "all the studies included in the analysis are functionally identical," and (2) the goal is "to compute the common effect

size for the identified population, and not to generalize to other populations" (Borenstein et al. 2009, 83). Consistent application of the SC cost-benefit formula to the 2017 IMLS State Summary dataset met the first criterion. Meeting the second criterion, the goal of META 2 Phase Two was to estimate the 2017 mean total return on investment for the population of public libraries in America.

Figures 9 and 10, below, contain the fixed effects meta-analyses of the 2017 regional public library mean total returns on investment. The weights used in the model were determined by the inverse of the region variances. That explains why the Southwest region received the highest weight in the model (62% without WIFI usage and 46% with WIFI usage). As the region with the lowest variance, the effect size estimate (mean) in the Southwest region had higher precision than the estimates in the other regions. With the highest variance and lowest precision, the Rocky Mountain region received the lowest weight in the model (.9% without WIFI usage and 1.4% with WIFI usage).

An estimated direct benefit for WIFI usage was omitted from the initial meta-analysis in order to replicate the META 1 fixed model meta-analysis. The fixed effects model without WIFI usage produced a point estimate of the effect size or mean total return for the regions of $5.42 (Figure 4, below). The combined variance was .002, which indicated that the meta-analysis increased the precision of the total return estimate. The summary confidence interval generated using the fixed effects model indicated with 95% confidence (alpha = .05, p < .0001) that the true effect size — the population mean total return — in 2017 was between $5.33 and $5.50.

Model	Study name	Statistics for each study							Sample size	Weight (Fixed)
		Mean	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	Total	Relative weight
	New	6.150	0.429	0.184	5.310	6.990	14.347	0.000	6	1.03	
	Mid-East	4.730	0.416	0.173	3.914	5.546	11.359	0.000	6	1.09	
	Great Lakes	5.240	0.291	0.085	4.670	5.810	18.026	0.000	5	2.24	
	Plains	5.520	0.117	0.014	5.290	5.750	47.111	0.000	7	13.76
	Southeast	4.980	0.179	0.032	4.629	5.331	27.825	0.000	12	5.90
	Southwest	5.510	0.055	0.003	5.402	5.618	100.182	0.000	4	62.46
	Rocky	5.430	0.452	0.204	4.545	6.315	12.022	0.000	5	0.93	
	Far West	5.130	0.122	0.015	4.890	5.370	41.886	0.000	6	12.60
Fixed		5.424	0.043	0.002	5.338	5.509	124.771	0.000		

Figure 9: 2017 Fixed Effects Regional Meta-Analysis of Total ROI Means Without WIFI Use Value

When an estimated value for WIFI usage was included in the fixed effects regional meta-analysis, the point estimate of the effect size (mean total return) increased by $0.10 to $5.52 (Figure

5, below). The combined variance increased by .001, but still indicated that the meta-analysis increased the precision of the total return estimate. The summary confidence interval generated using the fixed effects model with a WIFI usage value estimate indicated with 95% confidence (alpha = .05, p < .0001) that the true effect size — the population mean total return — in 2017 was between $5.41 and $5.62.

Model	Study name	Statistics for each study							Sample size	Weight (Fixed)
		Mean	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	Total	Relative weight
	New	6.210	0.441	0.194	5.346	7.074	14.085	0.000	6	1.53
	Mid-East	4.800	0.429	0.184	3.960	5.640	11.198	0.000	6	1.62
	Great Lakes	5.350	0.295	0.087	4.771	5.929	18.126	0.000	5	3.41
	Plains	5.640	0.121	0.015	5.403	5.877	46.631	0.000	7	20.30
	Southeast	5.090	0.193	0.037	4.711	5.469	26.317	0.000	12	7.94
	Southwest	5.670	0.080	0.006	5.513	5.827	70.875	0.000	4	46.40
	Rocky	5.490	0.461	0.212	4.587	6.393	11.918	0.000	5	1.40
	Far West	5.220	0.131	0.017	4.964	5.476	39.957	0.000	6	17.40
Fixed		5.520	0.054	0.003	5.414	5.627	101.296	0.000		

Figure 10: 2017 Fixed Effects Regional Meta-Analysis of Total ROI Means with WIFI Use Value

Three data sources were selected to explore total return on investment using the meta-analysis random effects model: (1) the 2017 regional total ROI means used in the fixed effects model with estimates of WIFI usage, (2) the mean of ten ROI studies of Ontario Province, Canada public library systems, and (3) Tessler's (2013) British Library mean willingness to pay (WTP) economic valuation. The meta-analysis random effects model was chosen for this exploration because it cannot be assumed that the three studies share a common, true effect size. The IMLS data represents the population of American libraries by region, the Canadian studies a sample of Ontario Province libraries, and the Tessler study represents a single, albeit large, public library. While a return on investment methodology was used to establish both the American and Canadian valuation estimates, the SC cost-benefit algorithm was applied to produce the American regional valuations and the Martin Prosperity Institute (2013) algorithm, developed for the Toronto Public Library study, was applied to produce the Canadian valuations. Contrastingly, the British Library economic value was derived from a willingness to pay (WTP) survey of users and nonusers (Tessler 2013, 49), but the study was included in the second random analysis because the mean, standard deviation, and sample size—the minimum raw data required for meta-analysis—were publicly available. Since the three data sources differ by geographic region, respondents, and methodology, the true effect or ROI can be expected to vary between the

three studies, so the assumption is made that they represent a "random sample of effect sizes that could have been observed" (Borenstein et al. 2009, pp. 77-78).

Unlike the fixed effects meta-analysis model that derives a point estimate of the effect size, the random effects model produced an estimate of the mean of the studies included in the meta-analysis, weighted by the inverse of the variance of each study plus a correction factor for the between-study variances. The studies included in the random effects meta-analyses are summarized in Table 9, below. For consistency, all total returns on investment were treated as ratios rather than currency.

Description	Mean	Standard Deviation	N
New England	6.21	1.08	6
Mid-East	4.80	1.05	6
Great Lakes	5.35	0.66	5
Plains	5.64	0.32	7
Southeast	5.09	0.67	12
Southwest	5.67	0.16	4
Rocky Mountains	5.49	1.03	5
Far West	5.22	0.32	6
Martin Prosperity (Canadian)	6.23	0.95	10
British Library	8.98	11.38	684

Table 9: Random Effects Meta-Analysis Data

As the first step in the random meta-analyses, an omnibus test of the null hypothesis that the study means were equal was conducted against the American and Canadian studies, then repeated using all studies (the omnibus test using the Q statistic, which is a standardized measure of within-study error, is described in Borenstein et al. 2009, 109-113). The omnibus test of the null hypothesis that the American and Canadian mean ROIs were equal yielded sufficient evidence to reject the null hypothesis with 95% confidence (alpha = .05, Q-value = 25.725, degrees of freedom = 8, I^2 = 68.9, p-value = .001). The test of the null hypothesis that the American, Canadian, and British mean ROIs were equal also provided sufficient evidence to reject the null hypothesis with 95% confidence (alpha = .05, Q-value = 87.187, degrees of freedom = 9, I^2 = 89.6, p-value < .001). Rejection of the null hypothesis in both tests allowed us to conclude that the differences between the study means shown in Table 4 include real differences that are not solely due to measurement error.

The random effects meta-analysis of the American and Canadian studies appears in Figure 11, below. Unlike the fixed effects model, the study weights include the between-study variance, which explains why the Southwest's weight is less dominant in the random effects model. By including the between-study variance factor, the random effects model gives more equal weight to all of the effect size information represented by the individual studies. The estimate of the mean of the American and Canadian studies is 5.50. The combined variance of 0.014 indicated that the meta-analysis increased the precision of the total return estimate. The summary confidence interval generated using the random effects model indicated with 95% confidence (alpha = .05, p < .0001) that the true effect size— the mean total ROI of the American and Canadian studies—was between 5.26 and 5.74.

Model	Study name	Statistics for each study							Sample size	Weight (Random)
		Mean	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	Total	Relative weight
	NewEng	6.210	0.441	0.194	5.346	7.074	14.085	0.000	6	5.45
	Mid-East	4.800	0.429	0.184	3.960	5.640	11.198	0.000	6	5.68
	GreatLakes	5.350	0.295	0.087	4.771	5.929	18.126	0.000	5	9.16
	Plains	5.640	0.121	0.015	5.403	5.877	46.631	0.000	7	16.96
	Southeast	5.090	0.193	0.037	4.711	5.469	26.317	0.000	12	13.38
	Southwest	5.670	0.080	0.006	5.513	5.827	70.875	0.000	4	18.78
	RockyMtn	5.490	0.461	0.212	4.587	6.393	11.918	0.000	5	5.11
	FarWest	5.220	0.131	0.017	4.964	5.476	39.957	0.000	6	16.49
	MartinProsp	6.230	0.300	0.090	5.641	6.819	20.738	0.000	10	8.98
Random		5.505	0.120	0.014	5.269	5.740	45.801	0.000		

Figure 11: Random Effects Meta-Analysis: US and Canadian Studies

Model	Study name	Statistics for each study							Sample size	Weight (Random)
		Mean	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	Total	Relative weight
	NewEng	6.210	0.441	0.194	5.346	7.074	14.085	0.000	6	7.86
	Mid-East	4.800	0.429	0.184	3.960	5.640	11.198	0.000	6	8.03
	GreatLakes	5.350	0.295	0.087	4.771	5.929	18.126	0.000	5	10.02
	Plains	5.640	0.121	0.015	5.403	5.877	46.631	0.000	7	12.30
	Southeast	5.090	0.193	0.037	4.711	5.469	26.317	0.000	12	11.48
	Southwest	5.670	0.080	0.006	5.513	5.827	70.875	0.000	4	12.63
	RockyMtn	5.490	0.461	0.212	4.587	6.393	11.918	0.000	5	7.59
	FarWest	5.220	0.131	0.017	4.964	5.476	39.957	0.000	6	12.21
	MartinProsp	6.230	0.300	0.090	5.641	6.819	20.738	0.000	10	9.94
	BritishLibrar	8.980	0.435	0.189	8.127	9.833	20.638	0.000	684	7.94
Random		5.790	0.198	0.039	5.403	6.178	29.282	0.000		

Figure 12: Random Effects Meta-Analysis: US, Canadian, and British Studies

The random effects meta-analysis of the American, Canadian, and British studies appears in Figure 12, above. As discussed above, the relative weights of the individual studies reflected the inclusion of the between-study variance, which appeared to increase with the inclusion of the British

study. The estimate of the mean of the American, Canadian, and British studies was 5.79. The

combined variance of 0.039 indicated that the meta-analysis increased the precision of the total

return estimate while reflecting a higher between-study variance. The summary confidence interval

generated using the random effects model indicated with 95% confidence (alpha = .05, p < .0001)

that the true effect size—the mean total ROI of the American, Canadian, and British studies —

between 5.40 and 6.17 adds strength to prior findings. The data also mark a small declining trend in

total ROI beginning in 2014. By 2017, at $5.06 ($5.15 with adjustments for WIFI usage), the total ROI

was approaching the low end of the META 1 cost-benefit range.

META 1 and META 2 meta-analysis results are compared in Table 5, below. The META 1 fixed

effects meta-analysis was replicated in META 2—both projects used an IMLS PLS State Summary file

updated with the SC cost-benefit algorithm as input. However, as expected from the results

discussed above, the META 2 fixed effects meta-analyses produced lower point estimates of the

population mean total ROI with slightly greater precision (lower variance) than the META 1 estimate.

The META 2 fixed effects meta-analysis without WIFI usage was .69 points lower than the META 1

estimate with a lower variance of .002 points, while the META 2 fixed effects meta-analysis with WIFI

usage was .59 points lower than the META estimate with a lower variance of .001 points. However,

both META 2 fixed effects meta-analyses support the META 1 conclusion that the typical total return

on investment in public libraries ranged between $5.00 and $6.00 for each $1.00 invested (Arns

2013, 65).

	Mean Estimate	Variance	Lower Bound	Upper Bound	Confidence Level
META 1 (2011 state summary File)	6.11	0.00	5.99	6.24	0.95
Meta 2 Without WIFI	5.42	0.00	5.33	5.50	0.95
Meta 2 With WIFI	5.52	0.00	5.41	5.62	0.95

Table 10: Fixed Effects Meta-Analysis Results: META 1 versus META 2

While the META 2 fixed effects meta-analyses replicated the META 1 meta-analysis, the random

effects meta-analyses differed in terms of data input. The META 1 random effects model meta-analysis

included raw inputs calculated based on the following studies: (1) Aabø's (2009) review of public library valuation studies, (2) a 2010 SC Economic Impact study, and (3) the 2011 IMLS PLS State Summary file analyzed using the SC economic impact model. The inputs to the META 2 random effects meta-analyses are summarized in Table 4, above. As shown in Table 5, above, the variances of the META 2 random analyses decreased by .14 and .12 points respectively, indicating that the precision of the META 2 random analyses increased. While the META 2 estimate of the mean returns without the British Library WTP study is .20 points lower than the META 1 estimate, both META 2 random meta-analyses support the META 1 conclusion that the typical total return on investment in public libraries ranged between $5.00 and $6.00 for each $1.00 invested (Arns 2013, 65).

Several factors seemed likely to contribute to these changes: Within the SC cost-benefit algorithm, the costs to the community of providing public library services are comprised of the local and state tax revenues allotted to fund public library operations. Public library revenue from local and state taxes rose 15% between 2012 and 2017. Revenue increases from local and state taxes were highest in the Rocky Mountain and Southeast regions (22% and 21%, respectively), and lowest in the Southwest region (9%). During the period, 58% of the increased revenue was used for increased personnel expenses, which may have contributed to the overall 2.5% increase in open hours. Approximately 9% of the local and state revenue increase during the period was accounted for by a 12% increase in collection expense, and 7.5% of the increased revenue was used for capital improvements, which increased by 11% between 2012 and 2017.

While the local and state taxes supporting public library services increased between 2012 and 2017, four of the library output measures of direct benefits in the SC cost-benefit algorithm decreased during the period: circulation, visits, reference transactions, and public access computer terminal usage. In contrast, library computer and WIFI utilization during the period increased 74%, with the highest increase in the Southwest region (173%) and the lowest increase in the New England region (22%). As described above, inclusion of a conservative valuation for WIFI usage increased the 2017 total ROI by approximately $0.09 (Table 10, above).

In contrast to the direct benefit decreases described above, program attendance also increased overall during the period by 27%. Most likely reflecting the evolving emphasis on library programs encouraged by the American Library Association's (2017) Libraries Transform campaign and the Public

Library Association's Project Outcome (2018), the total number of children's program increased overall by 24.5%, young adult programs increased by 47.9%, and total programs increased by 35.1% between 2012 and 2017. These substantial increases in young adult programs, ranging from a high of 75% in the Southeast to a low of 34% in the Mid-East, and strong increases in children's programs, ranging from a high of 27% in the Southwest to a low of 15% in New England, indicate that libraries successfully engaged with the rising generations of library users—holding the promise of future increases in the direct library benefits.

Other organizational and population factors appeared to have little effect at the state level. Phase Two research identified a weak, negative correlation (-0.22) between state population size and total ROI (see Figure 7, below). The lowest total ROIs were in Louisiana and Wyoming with populations of 4,684 million and 586 thousand, respectively. The highest total ROI was in Maine, with a population of 1,336 million. California, with the highest population (39.5 million) had a total ROI of $4.59. Consistent with the META 1 findings, thirty-one (62%) of the state total ROIs fell within $5.00 to $6.00 while their populations ranged from a low of 737 thousand in Alaska to a high of 27.8 million in Texas. There was also little correlation between total population size, registered borrowers, circulation, or library visits and total ROI (see Table 11, below).

Library Statistic	Correlation with Total ROI
% Population Registered Borrower	-0.11
Circulation per Total Population	0.14
Circulation per Registered Borrowers	0.17
Visits Per Population	0.12
Visits Per Registered Borrowers	0.16

Table 11: 2017 Select Library Statistics and Total ROI Correlations
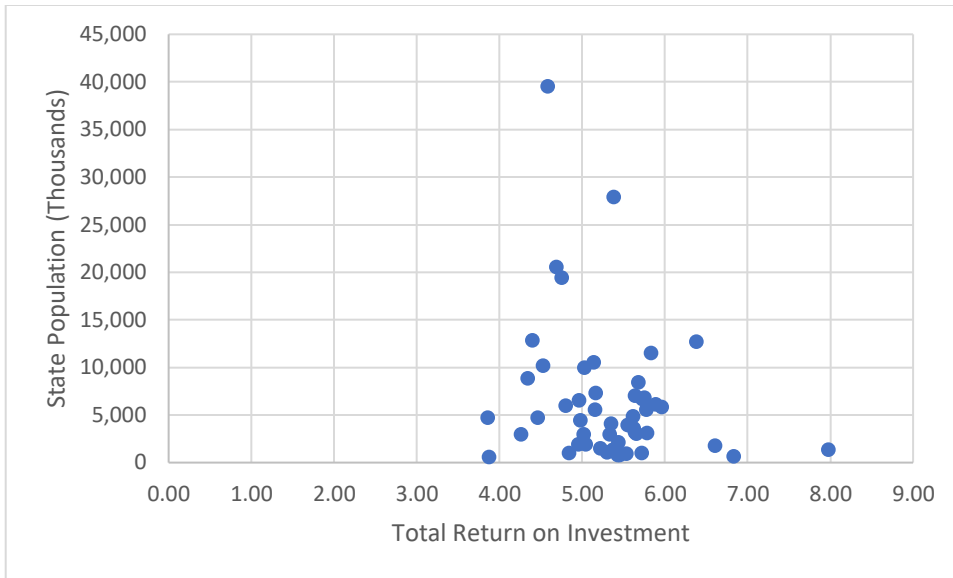
Figure 13: 2017 Total Return on Investment by State Population Sizes

Most of the demographic factors used to explore variation appeared to be weakly correlated with the state total ROIs as calculated using the SC cost-benefit algorithm. Slightly moderate correlations were found between total ROI and the percent of white (Non-Hispanic) population (.47), percent of home ownership (.46), the percent of female heads of household (-.41), and the percent African American (Non-Hispanic) population (-.48). The correlation between African American (Non-Hispanic) population and total ROI decreased to -.35 when the District of Columbia (DC) was removed due to: (1) DC's high percentage of African American population (50%), and (2) DC's low total ROI ($3.23) resulting from a one-time local capital revenue contribution of $48 million than nearly doubled the annual revenue. The total ROIs are clustered between $4.00 and $6.00 regardless of the percentage of African American population.

Several other moderate (.5) or nearly moderate correlations between select public library direct benefits and demographic statistics merit further study. For example, there were moderately positive correlations between non-English households and public library visits (.62), children's programs (.55), children's circulation (.55), and WIFI use (.43). The Mexican-born population percentage was also positively correlated with public library visits (.45), children's circulation (.48), and WIFI use (.45). The overall percentage of Hispanic population was positively correlated with visits (.46)

and children's circulation (.44). The correlations between the percentage of adults with less than a high school education and library visits (.38) and WIFI usage (.39) were comparatively high.

2018-2019

As Phase 1 neared completion, several initiatives were undertaken. The first was the development and use of a revised algorithm suggested by our economic consultant (Appendix A). Major changes included the addition of updated workforce data and revised computation of the Total Return on Investment, which has since been represented as an average. Tables 12 and 13 illustrate the changes that occurred when the 2017 state and regional total returns on investment were recalculated using the new algorithm.

Region	Mean 2017 without wifi	Mean 2017 with wifi	Mean-20117 2018 revision
New England	$6.15	$6.21	$6.02
Mid East	$4.73	$4.80	$4.53
Great Lakes	$5.24	$5.35	$5.12
Plains	$5.52	$5.64	$5.41
Southeast	$4.98	$5.09	$4.93
Southwest	$5.51	$5.67	$5.57
Rocky Mountains	$5.43	$5.49	$5.44
Far West	$5.13	$5.22	$5.01

Table 12: Recalculation of 2017 Total Return on Investment

2017	Mean	Standard Error	Variance	Lower Limit	Upper Limit	Relative Weight
New England	6.02	0.40	0.97	3.55	8.36	1.36
Mid East	4.53	0.42	1.08	3.75	5.24	1.23
Great Lakes	5.12	0.29	0.43	3.59	6.91	3.09
Plains	5.41	0.11	0.08	4.87	6.03	16.68
Southeast	4.93	0.20	0.50	2.86	7.24	2.62
Southwest	5.57	0.08	0.03	5.34	5.74	50.19
Rocky Mountains	5.44	0.46	1.07	4.17	6.81	1.23
Far West	5.01	0.10	0.06	4.83	5.31	23.60

Table 13: Recalculated 2017 Total Return on Investment

The box plot below is generally comparable to Figure 8 above. The states were sorted into regions using the IMLS geographic region variable (OBEREG), and Excel software was used to generate the means and standard deviations for each region. The side-by-side box plots illustrate the variability in the newly calculated total return on investment both within and between the regions.
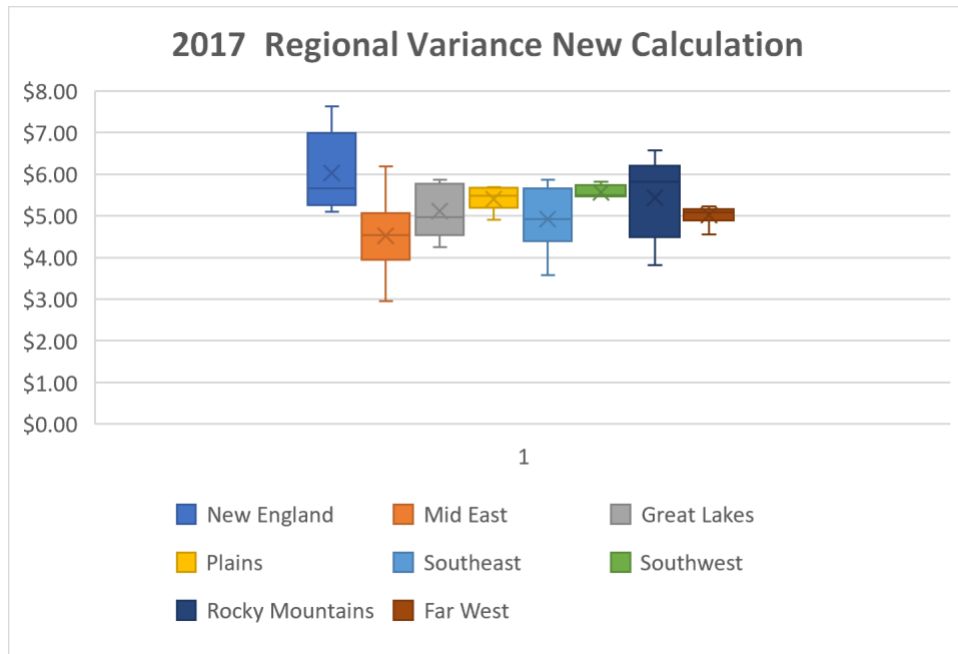
Figure 14: 2017 Box plots of Total Value Using Revised Formula

Region	Total Return 2017	Total Return 2018	Total Return 2019
New England	$6.02	$6.03	$6.27
Mid East	$4.53	$4.88	$5.44
Great Lakes	$5.12	$5.42	$5.32
Plains	$5.41	$5.91	$5.90
Southeast	$4.93	$5.42	$5.44
Southwest	$5.57	$6.10	$6.21
Rocky Mountains	$5.44	$6.10	$6.07
Far West	$5.01	$5.22	$4.84
Total	$5.25	$5.63	$5.69

Table 14: Mean Total Returns by Region 2017 Through 2019
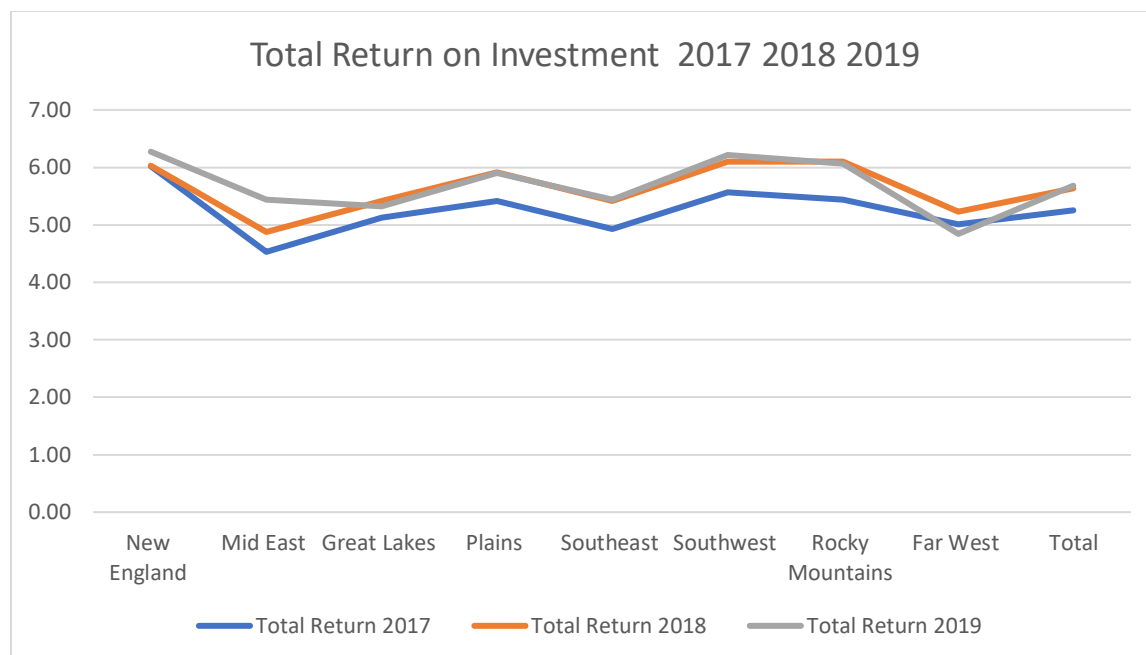
Figure 15: Mean Total Returns by Region 2017 Through 2019

2020

As noted by the Hamilton Project, by September 2020, the (COVID-19) pandemic had "created both a public health crisis and an economic crisis in the United States" (Ten Facts about COVID-19 and the U.S. Economy - The Hamilton Project). The U.S. economy suffered one of the sharpest contractions in its history during 2020 (Chapter-3-new.pdf (whitehouse.gov). On March 19, California issued the first statewide lockdown. Other states postponed or reversed orders to open their economies in July (A Timeline of COVID-19 Developments in 2020 (ajmc.com). By September, restaurants were thought to be a key component of virus spread (Restaurants May Be Key Component to COVID-19 Spread. (medscape.com). In terms of industrial performance, the early quarters of 2020 may have been the hardest (The Coronavirus Pandemic's Economic Impact (census.gov). In the early months, tens of millions of lost their jobs (Tracking the COVID-19 Economy's Effects on Food, Housing, and Employment Hardships | Center on Budget and Policy Priorities (cbpp.org). Public Library were also affected. As the 2021 *State of America's Libraries* noted, "Many libraries closed their doors to the public, a move supported by the Executive Board of the American Library Association (ALA)." … In March 2020, a sample of public libraires surveyed, indicated that 99% of the respondents were closed. State-of-Americas-Libraries-Report-2021-4-21 (1).pdf

Although many public libraries found innovative ways to create value and bring services and experiences to their communities, these efforts developed over time, and the harsher conditions of 2020 are reflected in Figure 16 below and 2020 calculations.
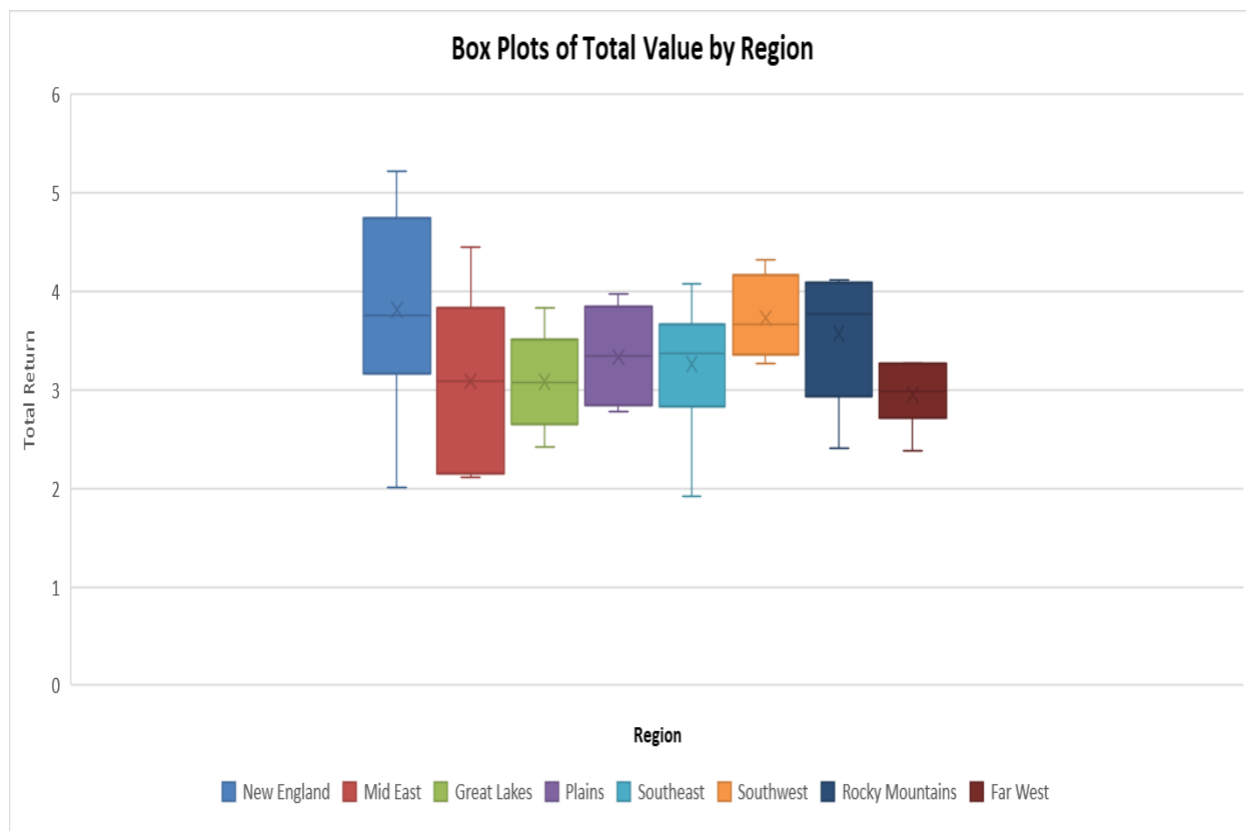
Figure 16: Variation of Total Value by Region 2020

Using the revised formula, the average 2020 direct benefit per dollar invested is estimated to be $3.25. This figure rose to $3.35 when indirect returns were also considered. The direct return was highest in the New England ($3.67) and Southwest ($3.67) states. Comparison to Figure 14 suggests a small number of possibly noteworthy changes. For example, while the average New England total ROI remains highest, the Mid East libraries have improved their relative position. Table 15 compares these figures with the full set of total returns on investment previously noted.

Region	Direct Return 2017	Direct Return 2018	Direct Return 2019	Direct Return 2020	Indirect Return 2017	Indirect Return 2018	Indirect Return 2019	Indirect Return 2020	Total Return 2017	Total Return 2018	Total Return 2019	Total Return 2020
								Table 3: Regional Analysis of Return on Investment Estimates				
New England	$4.94	$4.98	$5.18	$3.67	$1.08	$1.06	$1.09	$0.14	$6.02	$6.03	$6.27	$3.81
Mid East	$3.61	$3.92	$4.42	$2.93	$0.92	$0.96	$1.01	$0.15	$4.53	$4.88	$5.44	$3.08
Great Lakes	$4.20	$4.52	$4.42	$2.97	$0.91	$0.90	$0.90	$0.10	$5.12	$5.42	$5.32	$3.08
Plains	$4.49	$5.00	$4.97	$3.24	$0.92	$0.91	$0.92	$0.08	$5.41	$5.91	$5.90	$3.33
Southeast	$4.05	$4.52	$4.54	$3.16	$0.88	$0.89	$0.90	$0.09	$4.93	$5.42	$5.44	$3.26
Southwest	$4.66	$5.22	$5.32	$3.67	$0.91	$0.88	$0.89	$0.06	$5.57	$6.10	$6.21	$3.72
Rocky Mountains	$4.58	$5.21	$5.17	$3.48	$0.85	$0.89	$0.90	$0.09	$5.44	$6.10	$6.07	$3.56
Far West	$4.07	$4.32	$3.98	$2.91	$0.95	$0.90	$0.86	$0.04	$5.01	$5.22	$4.84	$2.95
Total	$4.33	$4.71	$4.75	$3.25	$0.93	$0.92	$0.94	$0.09	$5.25	$5.63	$5.69	$3.35

Table 15: Comparative Regional Analysis 2017-2020

Figure 17 illustrates this development.

Figure 17: Total Return, 2017 through 2020
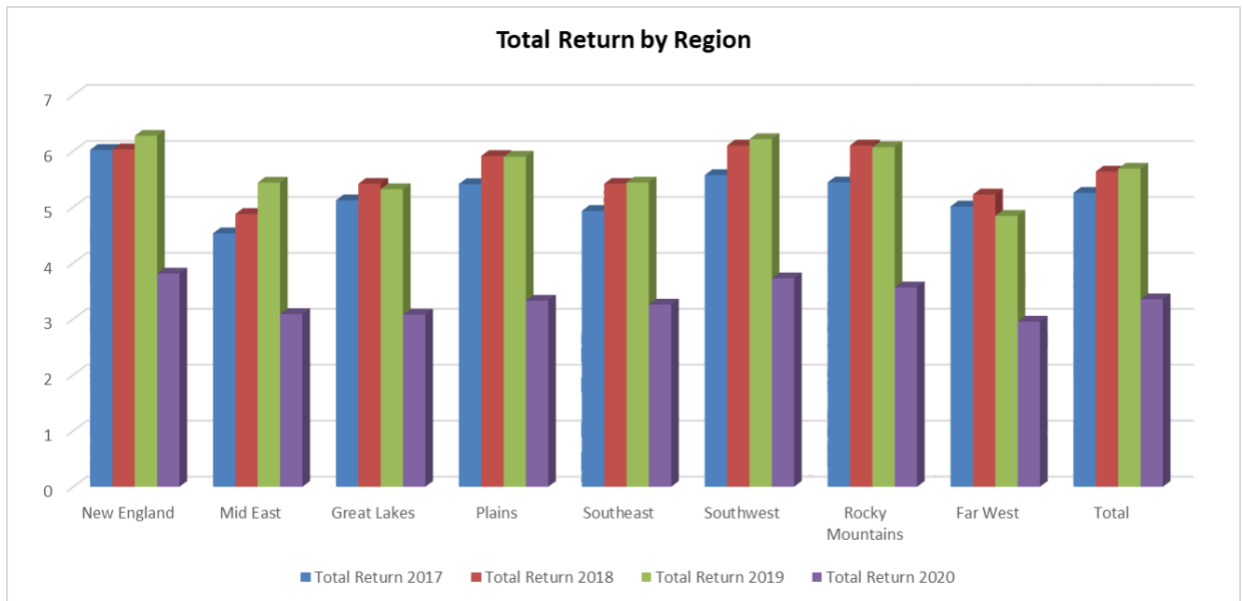
Meta-Analysis

Table 16 provides the mean, sample size, and standard deviation used to perform the following meta-analysis. New England libraries have the highest mean return at $3.81, followed closely by the Southwest libraries at $3.72 and the Rocky Mountain libraries at $3.56. Far West libraries have the lowest mean total return at $2.95. The Far West libraries also have the lowest

variability in total return at a standard deviation of $0.33. The 2020 mean total return based on each of the 50 states and the District of Columbia is $3.35 with a standard deviation of $.68.

Region	Mean	Sample Size	Std. Deviation
New England	3.8101	6	1.0900
Mid East	3.0850	6	0.9032
Great Lakes	3.0780	5	0.5147
Plains	3.3264	7	0.4589
Southeast	3.2569	12	0.6054
Southwest	3.7249	4	0.4385
Rocky Mountains	3.5633	5	0.6969
Far West	2.9516	6	0.3284
Total	3.3495	51	0.6828

Table 16: Mean, Sample Size, and Standard Deviation 2020 ROI by Region

Figure 17 contains the result of the 2020 regional meta-analysis. As discussed earlier, each region is treated as a separate study. The effect size of interest is defined as the mean total return. The fixed effects meta-analysis model produced a weighted average of the effect without assuming homogeneity of effect (Borenstein et al. 2009, 85). As noted above, a fixed effects model is appropriately used where: (1) "all the studies included in the analysis are functionally identical," and (2) the goal is "to compute the common effect size for the identified population, and not to generalize to other populations" (Borenstein et al. 2009, 83). Consistent use of the 2020 IMLS State Summary dataset met the first criterion.

The weights used in the model are again determined by the inverse of the region variances, which explains why the Far West and the Southwest regions received the highest weights in the model. As the regions with the lowest variance, the effect size estimates (mean) in the Far West and Southwest regions have higher precision than the estimates in the other regions. With the highest variance and lowest precision, the New England and the Mid East regions received the lowest weights in the model.

Study Name	Mean	Standard Error	Variance	Lower Limit	Upper Limit	Z-Value	p-Value	Relative Weight
New England	3.810	0.445	1.188	2.269	5.705	8.562	0.000	2.82
Mid East	3.085	0.369	0.816	0.489	5.392	8.366	0.000	4.11
Great Lakes	3.078	0.230	0.265	2.407	3.673	13.372	0.000	12.65
Plains	3.326	0.173	0.211	2.039	4.557	19.179	0.000	15.91
Southeast	3.257	0.175	0.366	1.771	4.733	18.637	0.000	9.14
Southwest	3.725	0.219	0.192	3.097	4.287	16.988	0.000	17.42
Rocky Mountains	3.563	0.312	0.486	2.530	5.001	11.433	0.000	6.90
Far West	2.952	0.134	0.108	2.354	3.700	22.014	0.000	31.06
Fixed	3.262	0.202	0.268	2.320	4.245	17.617	0.000	

Table 17: 2020 Regional Meta-analysis of Total ROI Means

Results

Phase 2 analysis also suggests an emerging patten of reliable, confirming, and mounting evidence related to the contributions that public libraries make to the economic prosperity and wellbeing of their communities with an roi in the range of five to six dollars under typical conditions. During 2020 when normal operations were often suspended, their return on investment remained remarkably positive, despite severe operational conditions and challenges.

The question that remained to be answered at the end of Phases 1, 2, and 3 recurs often: how to characterize and communicate results of this type in an effective manner. META 1 raised this issue in its discussion of willingness to pay related studies. META 2 Phase 3 employed a different informal and very exploratory approach: listening to the voices of users as they express their value propositions. An oral history format was chosen based on its ability to shine light on the everyday experiences, and the project was titled *Library Journeys*. The discussion below describes the steps that were taken and summarizes their results.

Two regions, New England and the Southwest, were selected for exploratory observation based on the META 2 results described above (strong 2020 performance and similar returns on investment). Participants were suggested and contacted by local library Directors and community members. As such, they comprised a self-selected convenience sample willing to describe the path that originally led them to be library users and how their value perceptions changed over time. Multiple New England locations were sought due to the presence of an unusually large number of very small libraries in that area. One Southwest community volunteered and was selected. The verbal introductory remarks used in each case followed the summary provided in Appendix C, and a copy was provided to the Library Directors and community members who arranged the meetings to assure a good level of familiarity with the process and reasoning behind the collection.

The histories were generally shared individually; but in some cases, they were shared in a small group settings. The first half of the sessions were free form with only a few prompts to move the stories forward over time or steer the conversation in ways that encouraged discussion about the reasoning behind decisions. In the second half, the conversations were guided by figures that included two groups of well-being or happiness constructs. The first draws from the OECD Better Life Index, that includes eleven conditions that OECD research has identified as essential to "material living conditions and quality of life" across nations (OECD Better Life Index). The second included

constructs developed within the ongoing National Impact of Library Public Programs Assessment
Project (NILPPA | National Impact of Library Public Programs AssessmentNILPPA | National Impact of
Library Public Programs Assessment | A research project by the American Library Association). Both
Indexes also share dimensions explored in the recent 2021 Institute of Museum and Library Services
project titled The Social Wellbeing impacts of The Nations's Libraries and Museums (Understanding
the Social Wellbeing Impacts of the Nation's Libraries and Museums | Institute of Museum and
Library Services (imls.gov). Figure 18 illustrates the OECD categories as they were presented in a
handout during the second half of the sessions. Figure 19 Illustrates the NILPPA categories.

Figure 18: OECD Better Living Index Categories as Presented

Figure19: NILPPA Better Living Index Categories as Presented

Using herself as an example, the META team member who met with the participants explained how the circles could be used to organize thoughts around experiences that might have occurred during a library journey. *Housing* was checked because she found had her first apartment on a library bulletin board – an important step in the process of establishing herself as an independent adult. *Social connection* was checked because membership in a book group had led to two lasting and important friendships. *Civil participation* was checked because she felt that she was able to vote more effectively in a upcoming election after attending a library program on local issues. The attendees were encouraged to use their own definitions as they considered the diagram ovals and given as long as they wished to explain why they had checked all or some of the ovals on the back of the page. The time spent on these reflections varied substantially, with some participants jotting down a few sentences and others writing as much as one or more pages. Figures 20 and 21 summarize the participants' diagram choices. Figure 22 combines the responses.

OECD Better Living Index

Category	Value
Income and Wealth	1
Environmental Quality	1
Work Life Balance	7
Civil Engagement	10
Subjective Wellbeing	6
Work Job Quality	3
Safety	5
Knowledge and skills	14
Social Connection	15
Health	2
Housing	0
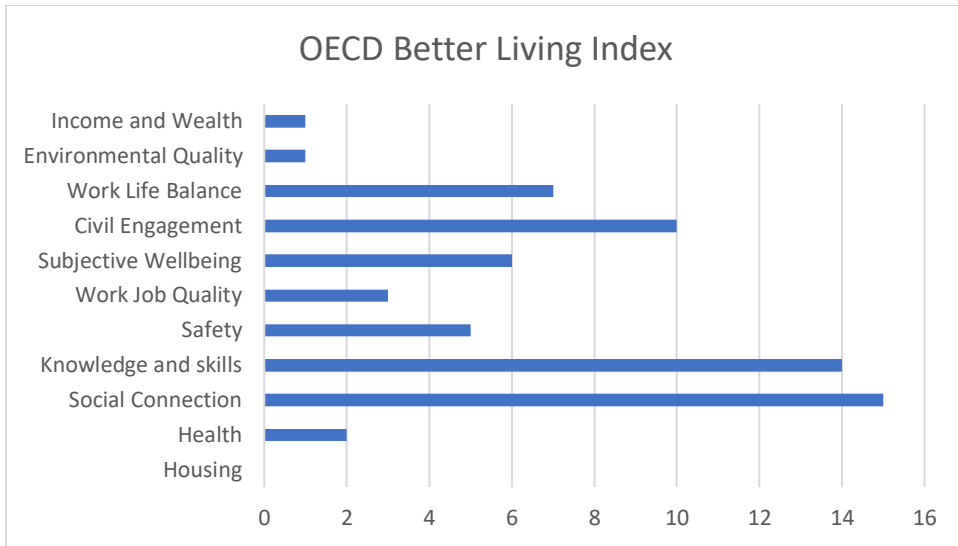
Figure 20: Frequencies Participant Responses OECD Categories

NILPPA Categories

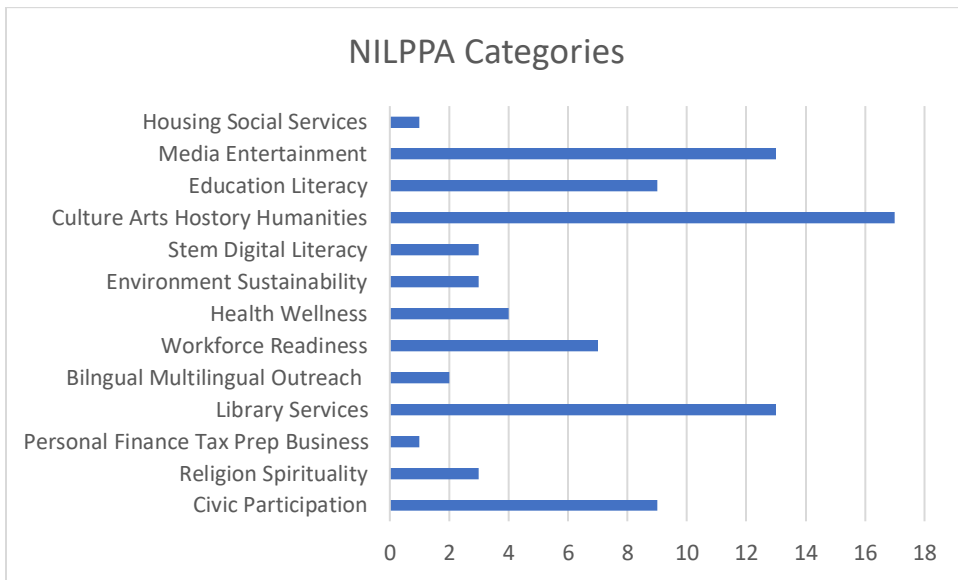| Category	Value
Housing Social Services	1
Media Entertainment	13
Education Literacy	9
Culture Arts Hostory Humanities	17
Stem Digital Literacy	3
Environment Sustainability	3
Health Wellness	4
Workforce Readiness	7
Bilngual Multilingual Outreach	2
Library Services	13
Personal Finance Tax Prep Business	1
Religion Spirituality	3
Civic Participation	9

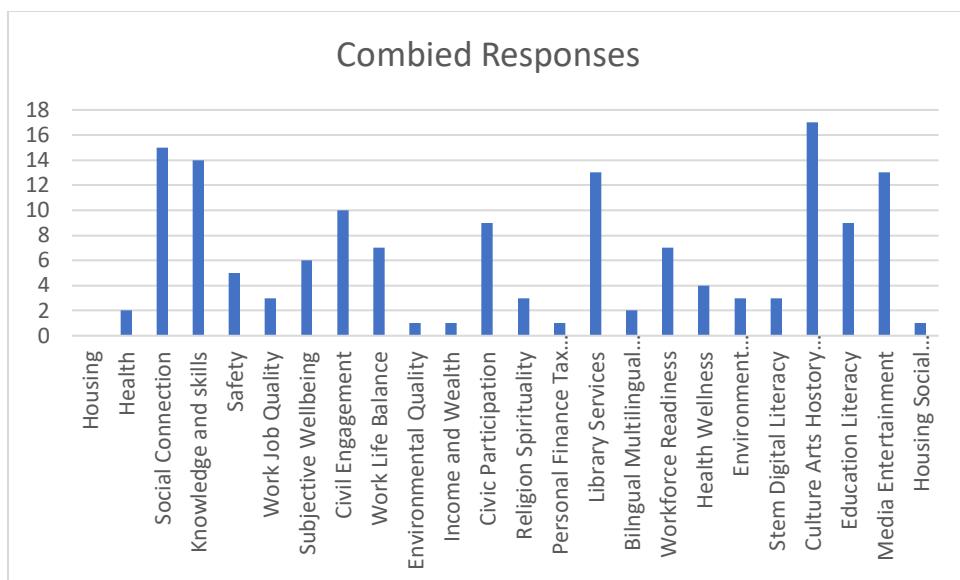**Figure 21: Frequencies Participant Responses NILPPA Categories**

Figure 22: Frequencies Combined OECD and NILPPA Categories

Library services were frequently mentioned, including help with homework as a young person, story hours for families, identification of community resources, and general references to "finding information" needed for daily activities, such as equipment repairs and outing requirements. But other themes frequently surfaced. In multiple cases, the first visit was thought of as a rite of passage: something that marked a new level of maturity and considered a proud accomplishment.

With movement into the school years, fact-finding assistance emerged as an important issue, but so did the development of reading patterns. Three other issues frequently arose at this point in the narratives: the development of a reading habit, the ability to transcend the limitations of time and space, and an attachment to the library as a physically, emotionally, and intellectually safe place.

As the narratives moved forward into full and later adulthood, social connections became a dominate theme, as well as civic participation and engagement. Library value became increasingly associated with place and experiences, for example a setting where young mothers could relax and talk to each other while their children read, played on computers, or attended story hours. Others valued the opportunity to come in contact with both like-minded people and those with ideas they had conversely not considered while spending time in a single location whether it be in a program or through a chance encounter while selecting a video. Two people who came to the United States recently spoke of the public library as a community road map. Volunteering provided a vehicle for

deeper community involvement. Three community leaders mentioned a special sort of constructive collaboration that occurred when community groups were using meeting rooms in one location. Bequest value figured in the narratives when participants explained why they brought their children to the library.

Results:

While detailed analysis or extension to a wider population that could be generalized remained beyond the scope of this project, a number of Phase 3 observations merit attention. The first is the confirmation that traditional library services (circulation, reference encounters, , etc.) of the type that figure in META and ROI type calculations also figure in the value calculations of those who interact with staff and/or use public library resources. Secondly, it suggests these products and services have literally come to share space with experiences that individuals associate with public library presence. Programs were almost universally mentioned, to the point that they appeared to be seen as part of the "collection", and social interactions were inseparable from benefit perceptions.

Conclusions

Public Libraries are an excellent investment in good times and bad. Mounting evidence suggests their contributions to the prosperity and well-being of their communities is strong. The consistency of current benefit estimates appears robust. Their predictable magnitude in typical periods tends to be in the $5 to $6 range. In recent times of hardship, this figure remained positive, outpacing other investments at $3 to $4.

It also appears that public libraries are currently operating within an experience economy. One of public libraries' most important value propositions – that public libraries help me enjoy and advance in life, learn more about myself and others, and encounter members of my community

whom I might not otherwise meet – was confirmed in this study. That is not to say that efforts like META 1 and 2 should be discontinued. Rather, the information needed to communicate their results effectively needs to come through conversations that tie economic results to experiences and aspirations in a multidimensional model. The Phase 3 participants had little trouble with this type of thinking because they naturally measure value from the viewpoint of their experience; they value public libraries because changes happen through place and association. A research agenda that explores this relationship more fully merits attention and would be a profitable next step toward powerful characterization.

References

Copenhagen Economics. (2015). *The Economic Impact of Public Libraries*. Retrieved from http://www.fremtidensbiblioteker.dk/upl/website/pdf-engelsk/SamlefinalopslagUK1.pdf

Durrance, J., & Fisher, K. (2005). *How libraries and librarians help: A guide to identifying user-centered outcomes.* Chicago, IL: American Library Association.

Howard Fleeter & Associates (2016, April). *Return on investment of Ohio's libraries & comparison with other states.* Retrieved from http://olc.org/wp-content/uploads/documents/post-id_2060/2016/04/Ohio-Public-Libraries-ROI-Report.pdf

Fujiwara, D., Lawton, R., & Mourato, S. (2015). *The health and wellbeing benefits of public libraries*: *Full report*. Arts Council England and SIMETRICA. Retrieved from https://www.artscouncil.org.uk/sites/default/files/download-file/The%20health%20and%20wellbeing%20benefits%20of%20public%20libraries.pdf

Getz, M. (1979). The Efficient Level of Public Library Services. NBER Working Paper No. w0321, Available at SSRN: https://ssrn.com/abstract=252195

Haas Center. (2013). *Taxpayer return on investment in Florida public libraries*. Retrieved from http://roi.info.florida.gov/Content/PDFs/Studies/Library%20ROI%202013.pdf

Holt, G.E. , & Elliott, D. (1998, November 1). Proving your library's worth: A test case. *Library Journal*, *123*(18), 42–44.

Imholz, S., & Arns, J. (2007). *Worth their weight: An assessment of the evolving field of library valuation.* New York, NY: Americans for Libraries Council. Retrieved from http://www.libsci.sc.edu/metaweb/WorthTheirWeight.pdf

James, S. (2013, September). *Hutt City libraries social return on investment analysis*. Retrieved
      from http://iportal.huttcity.govt.nz/Record/ReadOnly?Tab=3&Uri=4576756

Jarrett, J. E. (2017). *Texas public libraries: Economic benefits and return on*
      Retrieved from https://repositories.lib.utexas.edu/bitstream/handle/2152/45600/bbr-2017-texas-public-
      libraries.pdf

Gómez-Hernández, J., Sánchez, E. & Hernández-Pedreño, M. (2017). Social and digital empowerment
      of vulnerable library users of the Murcia Regional Library, Spain. *El Profesional de la
      Informacion*. 26, 20-33.

Griffis, M. R. & Johnson, C.A. (2014). Social capital and inclusion in rural public
      libraries: A qualitative approach. *Journal of Librarianship and Information Science*, *46*, 96–
      109.

Kawartha Lakes Public Library. (2015). *Public Library Economic Impact Study [Powerpoint
      Slides]*. Retrieved from
      https://drive.google.com/file/d/0BwLnmBwFXNmBZ0lnaVFzUHhxWDg/view?pli=11

Lal, J. (2013, July). A Return on Investment Study of Salt Lake County Library Services.
      Retrieved from https://www.slcolibrary.org/gl/glal/pdf/slclsROIStudy2013.pdf

Linhartová, V & Stejskal, J. (2017). Public Libraries' services and their economic evaluation.
      Scientific Papers of the University of Pardubice, Series D: Faculty of Economics and
      Administration, 24, 90-101.

McCook, K. de la Peña. (2000). *A Place at the Table: Participating in Community Building*. Chicago:
      American Library Association.

McCook, K. de la Peña. (2004) *Introduction to Public Librarianship (3rd ed.).* Chicago: American
      Library Association Neal-Schuman.

McIntosh, C. R. (2013). Library return on investment: Defending the contingent valuation
      method for public benefits estimation. *Library & Information Science Research*, *35*(2),
      117–126.

Meyer, J. (2018). Poverty and public library usage in Iowa. *Public Library Quarterly*, *37*, 53-60.

Morris, A., Hawkins, N., & Sumsion, J. (2002). Economic value of public libraries in the UK. *Libri,
      52*(2),   78–87. Retrieved from http://www.librijournal.org/pdf/2002-2pp78-87.pdf

Nashville Area Chamber of Commerce, The Research Center. (2016, April). *Economic impact
      and contribution analysis: Nashville Public Library*. Retrieved from
      https://library.nashville.org/sites/default/files/field/page/file/nashville-public-library-impact-
      and-contribution_study.pdf

Neuman, S. B., & Moland, N. (2019). Book deserts: The consequences of income segregation on children's access to print. *Urban Education*, *54*(1), 126-147.

Newmarket Public Library. (2016). In Federation of Ontario Public Libraries, *Recent Ontario public library economic impact studies*. Retrieved from http://fopl.ca/news/recent-ontario-public-library-economic-impact-studies/

Obal, M. P. (2015). An economic valuation of Marikina City Library using revealed preference methods. *Journal of Philippine Librarianship*, *35*, 1-18.

Oliphant, T. (2014) "I'm a library hugger!": Public libraries as valued community assets. *Public Library Quarterly*, *33*, 348-361.

San Francisco Public Library (2015) *Reinvesting and renewing for the 21st century: A community and economic benefits study of San Francisco's Branch Library improvement program*. Retrieved from https://sfpl.org/pdf/about/commission/ReinvestingRenewing.pdf.

Tessler, A. (2013). *Economic valuation of the British Library*. Retrieved from http://www.bl.uk/aboutus/stratpolprog/increasingvalue/britishlibrary_economicevaluation.pdf

Usherwood, B. (1999). Value and impact studies. *65th IFLA General Conference ─ August 20─28, 1999*. Retrieved from http://archive.ifla.org/IV/ifla65/papers/110-84e.htm.

Van House, N. A. (1983). *Public library user Fees: The use and finance of public libraries*. Westport, CT: Greenwood Press.

Wolf, F. M. (1986). Meta-Analysis Quantitative Methods for Research Synthesis. Beverly Hills ; London : SAGE.

CALCULATING THE SOUTH CAROLINA PUBLIC LIBRARY COST-BENEFIT FORMULA USING THE IMLS STATE SUMMARY FILE
Revised: 2/7/21

Measure 1: Primary Direct Economic Impact

Data needed:

Total employment: TOTSTAFF (Total paid FTE employees)

Total salaries and benefits: STAFFEXP

Total federal funding: FEDGVT

All other local and non-local funding: OTHINCM (operating revenue not included in LOCGVT, STGVT, and FEDGVT), LOCGVT, STGVT

Process:

Direct impacts calculated in I-O software based off of the following imputed employment figure: (TOTSTAFF)*(FEDGVT+OTHINCM)/(FEDGVT+OTHINCM+LOCGVT+STGVT)

Primary NAICS code: 519120

Economic multiplier for secondary effects: State-level multipliers included in spreadsheet; multiplier for SC is 1.87

Measure 2: Value of the loans of books and other materials

= total circulation * $10.25 (a conservative valuation per item based on a review of Doug's META analysis)

= TOTCIR * $10.25

Measure 3: Electronic collections, magazines, and newspapers

= (print subscriptions total + local electronic serial subscriptions) * $300

= (ELECCOLL + SUBSCRIP) * 300

49

Measure 4: Measuring the value of in-library use of materials

= annual visits * (median hourly wage/2)

= VISITS * (median hourly wage / 2)

Measure 4B: Value of reference questions answered

= total annual reference questions * (median hourly wage/4)

= REFERENC * (median hourly wage / 4)

Measure 5: Measuring the value of programs conducted by the libraries in the state

= total program attendance * (median hourly wage)

= TOTATTEN * (median hourly wage)

Measure 6: Value of facilities and equipment

= total number of public access computer users per year * $3.75 (estimate based on Kinko's public computer charge)

= PITUSR * $3.75

= total wireless sessions per year * $0.05 (PEW estimate of $35/month internet access converted to hours)

= WIFISESS * $0.05

Table 3: Regional Analysis of Return on Investment Estimates											
Region	Direct Return 2008	Direct Return 2009	Direct Return 2010	Direct Return 2011	Indirect Return 2008	Indirect Return 2009	Indirect Return 2010	Indirect Return 2011	Total Return 2008	Total Return 2009	Total Return 2010	Total Return 2011
New England	$3.90	$4.52	$4.78	$4.70	$1.72	$1.73	$1.72	$1.70	$5.62	$6.25	$6.50	$6.39
Mid East	$3.20	$3.71	$4.00	$3.65	$1.60	$1.60	$1.73	$1.59	$4.80	$5.31	$5.73	$5.23
Great Lakes	$3.68	$4.23	$4.18	$4.16	$1.50	$1.49	$1.44	$1.46	$5.18	$5.72	$5.62	$5.62
Plains	$4.13	$4.63	$4.83	$4.80	$1.51	$1.51	$1.57	$1.52	$5.64	$6.14	$6.40	$6.31
Southeast	$3.36	$4.09	$4.20	$4.35	$1.40	$1.47	$1.45	$1.48	$4.76	$5.56	$5.65	$5.83
Southwest	$3.66	$4.17	$4.45	$4.49	$1.41	$1.46	$1.49	$1.55	$5.07	$5.63	$5.94	$6.03
Rocky Mountains	$4.13	$4.99	$5.04	$4.91	$1.52	$1.58	$1.51	$1.48	$5.65	$6.57	$6.55	$6.39
Far West	$3.31	$4.01	$4.09	$3.90	$1.50	$1.54	$1.52	$1.45	$4.81	$5.55	$5.61	$5.35
Total	$3.51	$4.15	$4.25	$4.11	$1.51	$1.54	$1.54	$1.51	$5.02	$5.69	$5.79	$5.63

Table 3: Regional Analysis of Return on Investment Estimates											
Region	Direct Return 2017	Direct Return 2018	Direct Return 2019	Direct Return 2020	Indirect Return 2017	Indirect Return 2018	Indirect Return 2019	Indirect Return 2020	Total Return 2017	Total Return 2018	Total Return 2019	Total Return 2020
New England	$4.94	$4.98	$5.18	$3.67	$1.08	$1.06	$1.09	$0.14	$6.02	$6.03	$6.27	$3.81
Mid East	$3.61	$3.92	$4.42	$2.93	$0.92	$0.96	$1.01	$0.15	$4.53	$4.88	$5.44	$3.08
Great Lakes	$4.20	$4.52	$4.42	$2.97	$0.91	$0.90	$0.90	$0.10	$5.12	$5.42	$5.32	$3.08
Plains	$4.49	$5.00	$4.97	$3.24	$0.92	$0.91	$0.92	$0.08	$5.41	$5.91	$5.90	$3.33
Southeast	$4.05	$4.52	$4.54	$3.16	$0.88	$0.89	$0.90	$0.09	$4.93	$5.42	$5.44	$3.26
Southwest	$4.66	$5.22	$5.32	$3.67	$0.91	$0.88	$0.89	$0.06	$5.57	$6.10	$6.21	$3.72
Rocky Mountains	$4.58	$5.21	$5.17	$3.48	$0.85	$0.89	$0.90	$0.09	$5.44	$6.10	$6.07	$3.56
Far West	$4.07	$4.32	$3.98	$2.91	$0.95	$0.90	$0.86	$0.04	$5.01	$5.22	$4.84	$2.95
Total	$4.33	$4.71	$4.75	$3.25	$0.93	$0.92	$0.94	$0.09	$5.25	$5.63	$5.69	$3.35

Oral History Project – The Library in the Life of the User

Introductory Remarks

The first thing I need to do is thank you so much for being willing to learn about this project. Our conversations will focus on your journey to becoming a public library user and the reasons you use the library today. I'll be taking notes during the conversation and then ask you to follow up with a note to me.

The thoughts that surface during our conversations will be used to add a much-needed personal perspective to on-going efforts to develop a better understanding of the contributions that public libraries make to the prosperity and well-being of those who live in their communities.

We are currently in the second phase of this project, and you can find out more about the results of the first phase by looking at the White Paper found at [final. Meta white paper 1.28.2014.jwa (sc.edu)](). As you read, you will see that the Institute of Museum and Library Services has federally funded the project.

You will also see that I am the Principal Investigator who guides the project, and conducting it continues to be part of my work at the University of South Carolina. Prior to coming to South Carolina, I worked as an information specialist, programmer-analyst, and senior evaluator/project manager at the U.S. General Accounting Office, where I managed and contributed to projects related to national defense, information policy and public health. Although I enjoyed my work, I eventually decided to return to my real interest: public libraries. Since receiving a PhD in Library and Information Science at the University of North Carolina at Chapel Hill, I have also taught public library courses at the University of North Carolina at Chapel Hill and North Carolina Central University.

You will also see in the White Paper that up until now our efforts have typically involved statistical and economic analysis. We have sought your company because we are convinced that there needs to be more to this story. Fortunately, we have a small amount of time left to pursue this idea and are pleased to be able share your thoughts in what we have come to think of as a final *library journey section* that combines your thoughts with those of members of other communities who use their libraries to enhance their lives, learn more about themselves, and learn more about others whom they might otherwise not meet.

At this time we expect this short new section to include short summary of some of the ideas that seem to resonate within the stories that people share with us and some bullet points that contain a few direct quotes that people indicate they are comfortable sharing with others. No one will be personally identified beyond a note indicating the region or setting (for example New England book club member or long time Southwest Friends of the Library member) unless they would like to be. Once we have enjoyed the stories that emerge during the first half of our time together, I'll ask people I chat with to think again about some of the types of outcomes and elements of well-being that have surfaced in other studies and projects.

Diagrams similar to the ones below will be used to help us do this by letting us mark a few topics that match our experiences. Next, we'll talk a bit about our choices. In my case, I will probably mark *Housing* because I found my first apartment on a Library bulletin board. Someone else might mark *Civic Participation* because they felt they could vote more wisely after learning more about local issues during a library program. Others might circle *social connection* because they made new friends when they joined a knitting group or enhanced *subjective well-being* based on relaxing videos or stimulating book club discussions. Another person might check literacy because they discovered the joy of reading and believe these experiences changed their lives and set them on a career path.

When I am listening to just one person, these conversations are likely to run for close to an hour. In the case of small groups, the time may be longer since there will be many ideas floating around us.

Thank you again for your attention. I'm happy to answer questions now or any time.

Diagram Examples