

Economic Impact and Contribution Analysis: Williamson County Public Library

**Nashville Area Chamber of Commerce
The Research Center
January 2017**



EXECUTIVE SUMMARY

The local library within a community represents an essential institution that integrates with the cultural, social, and economic forces of the area. The library system forms those key links of community to the larger region and to the world through its resources, expertise and environment. The Williamson County Public Library system provides access to knowledge, learning opportunities, and a vital center for community engagement. The library offers this array of resource for its many constituents. As such, an examination of the impact of the library's economic and social impact is a key component to understanding the work of this pivotal institution.

This study focuses on several major elements of impact and opportunity attached to the Library system. The key components featured in this study include:

- **Economic impact and contribution** of the Library system to Williamson County
- Examination of **return on investment (ROI)** through change effects on economic and social capital of the community
- Consideration of the **unique economic aspects and roles of the Library** within the context of the broader economy and community, reflective of the public good value as a monetized asset in aggregate, per library user and per library supporter

The report measures the impact of the Williamson County Public Library to the county and its constituents. Data collection and analysis utilized a mix method approach. A key part of the analysis draws from survey data developed for this study to assess valuation of library services by users. This valuation provided the basis for a cost benefit analysis. Survey results also yielded important data on user demographics and organizational effectiveness.

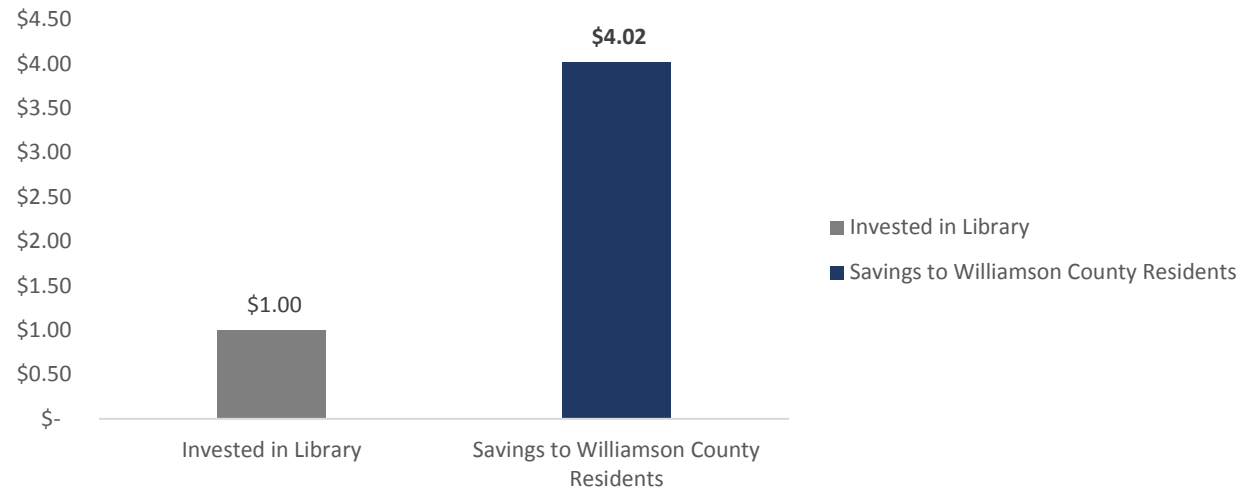
KEY FINDINGS

Key points drawing from the study of Williamson County Public Library highlight the ways it delivers important and far-reaching returns to the county:

- Williamson County Public Library makes a sizeable contribution to the county's economic well-being, with **market value of services of \$38.59 per capita** and with **direct benefit to the community totaling more than \$8 million**.
- With a wide range of programs, services and facilities, Williamson County Public Library's **return on investment to the county is \$4.02 for every \$1.00 of expenditure** for the Library system.
- Patrons and users of the Library express **enthusiastic support for the quality and diversity of programs, including overall rating of 9.2 excellence on 10-point scale for Library services**, with additional high ratings for staff helpfulness and materials and equipment meeting user needs.
- The community sees the library as a useful institution in the county, rating it an average **9.3** on net promoter score. The total score is **78.3**.
- Library users demonstrate **high confidence in the Library's fulfillment of its mission**, with a range of 8.4 to 8.8 of excellence in inspiring reading, advancing learning and connecting the communities throughout the county.
- 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.

In short, the Williamson County Public Library puts to effective and innovative use its investments and resources, making a real difference in people's lives. Dollars spent to ensure the county's library system takes a leadership role in education, culture, entertainment and civic activities pay dividends that are measurable and significant. The Williamson County Public Library system exemplifies through its work the meaning of true community centers, for it serves as those locations through its facilities, programs, and outreach in countless ways. This study comprises comprehensive research, which showcases in both qualitative and quantitative terms the value realized by this vital institution and its work.

Key Findings: Williamson County Public Library Services Cost Benefit and Economic Impact



Economic Impact and Contribution Analysis: Williamson County Public Library

Table of Contents

Introduction

Methodology

Economic Impact Findings

- Patron Engagement Findings
- Cost-Benefit Analysis

Conclusions

Bibliography

Survey and Community Demographics

Appendices

Economic Impact and Contribution Analysis: Williamson County Public Library

Introduction

The impact of a community's library system reaches across many facets of that community and life in that area. The cultural, social and economic forces that make an area thrive draw deeply and continuously from the knowledge and learning available there – knowledge and learning that connect generations, neighborhoods, experiences and ideas. The library, with its many locations covering a county and its communities, can coalesce these forces of knowledge, learning, ideas, opportunities and people. In this way, the library can help all its participants grow as their county grows.

The need for a comprehensive examination of the library as an entity of economic and social importance in Williamson County is critical to understanding this key institution as well as for guiding it toward future opportunities.

Using combined sources of real-time data, proprietary databases and expert insights and experiences, this research provides a basis for key leaders to leverage information in practical ways to guide, shape and manage future opportunities. Most importantly, this research maintains continuity with data and research about the broader regional economy, offering a broader context for understanding the Williamson County Public Library in a systematic way.

Williamson County's library history dates to the early 20th Century. Recognizing the need for a library, the first facility was privately established through donations of books and financial assistance. Beginning as a volunteer project by the American Legion in the 1920's, the Business and Professional Women's Club worked with a group of citizens to establish the Williamson County Public Library in 1937. Initially open three days a week, the community leveraged interest in the library to request funding from the County Court that in 1938 appropriated \$1,000 to begin full-time library operations.

Through book donations and additional funding sources, the library continued to grow, serving rural patrons in addition to those in the city of Franklin. In 1948, the War Memorial Library was established in honor of those who had fought in the World War II. Eventually the library outgrew that location as well.

Serving the children and youth of the community has always been a central feature of the Williamson County Library. Early on, proponents of the library cited the need to serve the 40 percent of the youth ages 14 to 17 that were not attending school. This area of focus continued through the years and by the 1950's, the library had developed formal partnerships with local schools.

From its inception, the library was supported by the local community. Many volunteers worked to foster its growth as they have celebrated its achievements. Thus, Williamson County Public Library's heritage is one that complements the change, growth and needs of the county and its people. The foresight to sustain the growth of a quality, innovative library system has remained a hallmark value in Williamson County. Consequently, it is useful to discern what library investments and achievements have meant, and continue to mean, for a county that prides itself on strong economic, civic and social achievement.

This study focuses on several major elements of impact and opportunity attached to the Library system. The key components featured in this study include:

- **Economic impact and contribution** of the Library system to Williamson County
- Examination of **return on investment (ROI)** through change effects on economic and social capital of the community
- Consideration of the **unique economic aspects and roles of the Library** within the context of the broader economy and community, reflective of the public good value as a monetized asset in aggregate, per library user and per library supporter

Methodology

This study employs various data collection and analysis methods, including online surveys of patrons and constituents and cost-benefit analyses to assess total Library impact on the county economy. This study uses a mixed-method approach to calculate different kinds of ROI for Williamson County Public Library. This study relies on a variety of accepted and relevant methods and sources to provide an overall framework for understanding and communicating the Library's role as an asset of the county.

The assessment of a public good offering such as the library engages with methods appropriate to capture credible and meaningful input for valuing activity. This research combines contingent valuation to inform willingness to pay and willingness to act among area residents in relation to Library offerings, along with economic impact modeling that considers broader implications of the Library as a county and community economic and social resource.

Methods have varied in the field of evaluating the economic impact of libraries and library systems. Since the library operates as a provider of "public goods," there is a need and opportunity to establish value in ways that are both typical and atypical of many other facets of an area economy.

Since the very mission of most modern libraries is to provide the general public with free access to services and materials, the use of these resources does not occur through transactions that can be identified or monetized in ways that many consumer transactions are. In this case, adaptive methods are employed to provide a framework that gives meaning and plausibility to those non-monetized transactions.

The field of **contingent valuation** is a widely used, accepted method of assessing people's preferences for public goods by establishing a willingness to pay (WTP) in dollar amounts (Mitchell, 1989). In the absence of a conventional market for goods, peoples' perceptions of value-hypothetical markets are modeled after real markets. Because the WTP values that are established are contingent on the hypothetical market-used respondents, the method is termed **contingent valuation** (Brookshire and Eubanks, 1978). Information gathered through this process typically includes descriptions of the goods being valued and the circumstances in which they are available; respondents' willingness to pay for goods being valued and characteristics of the respondents that are relevant to the value and use of the goods (Mitchell, 1989).

Application of contingent valuation approaches can include both WTP and willingness to accept (WTA) scenarios for use of public goods. The two types generally relate to the ability or necessity of the public to buy or sell some aspect of the public goods in question, or to buy or sell similar or equivalent goods in a private-market setting. Often, WTA values - frequently applied to use of natural environment or other, less tangible goods- result in markedly higher values than do willingness to buy (WTB).

In the application to library goods and services as a ‘public good,’ the WTP approach is both feasible and appropriate, generating modeled scenarios and information that mirror private-market transaction values. These values are widespread and understood by the general public and, in this case, also by users of library goods and services. The classification of goods and services of public libraries as quasi-private goods, in fact, provides a useful understanding of the way these goods function in a mirroring fashion to private- market activity; how they differ from pure public goods that are essentially intangible and how they present greater challenge to a contingent-valuation approach.

Table 1. Classes of Goods

Class of Good	Characteristics	Examples
Pure private	Individual property rights Ability to exclude potential consumers Traded freely in competitive market	Agricultural products Automobiles Financial services
Quasi-private	Individual property rights Ability to exclude potential consumers Not freely traded in competitive markets	Public libraries Recreation in parks TV frequencies
Pure public	Collective property rights Cannot exclude potential consumers Not traded in any organized market	Air visibility Environmental risks National defense

(Mitchell, 1989)

The determination of price levels for materials and services from the library system is established through a variety of affirming processes in this study. The added strength of the use of WTP measures in this study results from valuation and usage input derived from active, rather than passive, uses of the goods under consideration.

In other words, the application of the method gains greatest utility where usage values are established through estimation and affirmation from users that respond to actual behaviors, rather than theoretical constructs. This is an important feature that bolsters the appropriateness of contingent valuation for the study of libraries and their impacts. While contingent valuation is used in a variety of topics for which economic impacts are sought, some—such as those relating to the physical environment or other more encompassing public goods—present more opportunities for conjecture on the part of would-be users than do those where tangible goods, services and interactions can be identified in considerable detail.

Solicitation for inputs through active users overcomes any critique of merely passive use values, such as may occur in environmental topics that often rely on contingent valuation methods. The specific approach in this study, again owing to the high transparency of library goods and services as mirrors of many private-market transactions, is categorized as a direct and hypothetical set of methods.

Table 2. Methods of Valuing Public Goods

	Direct	Indirect
Observed market behavior	OBSERVED/ DIRECT Referenda Simulated markets Parallel private markets	OBSERVED/ INDIRECT Household production Hedonic pricing Actions of bureaucrats or politicians
Responses to hypothetical markets	HYPOTHETICAL/ DIRECT Contingent valuation Allocation game with tax refund Spend more-same-less survey question	HYPOTHETICAL/ INDIRECT Contingent ranking Willingness-to(behavior) Allocation games Priority evaluation technique Conjoint analysis Indifference curve mapping

(Mitchell, 1989)

The reliance on behavioral economics and experimental economics thus serves a very useful function in developing an understanding of the monetized value of goods and services provided or maintained by the public sector. Particularly, where quasi-private market activity as occurs with libraries exists, the use of hypothetical constructs to formulate value allows for a robust set of inputs that can then be applied to other economic impact analysis.

During November and December 2016, an online survey was administered to a database of Williamson County Public Library users and other Library stakeholders. Excluding bounced emails, a total of 25,203 survey invitations were distributed via email. The survey instrument was developed through testing and refinement in October and November 2016 and was launched to the full recipient group through the Qualtrics platform. Survey participation was encouraged through inclusion of the survey’s purpose statement and survey link in the Williamson County Public Library website, through staff promotion to patrons and through a series of directed outreach email communications to a random sample of patrons. In total, 1,543 responses were captured and analyzed. The survey responses were assessed at a 95% confidence level and with a confidence interval of +/- 2.49%.

The survey instrument contained a total of 39 unique questions, designed to capture accurate valuations of library products and services as experienced by library patrons. Incorporating extensive tree and branch logic, the survey was designed to foster survey completion and accuracy by respondents while also being understandable to respondents and maintaining their interest.

The survey included two major sections regarding Library patron activity. In order to achieve the highest level of valuation accuracy, only patrons who had been to the Library in the last 12 months could access the product valuation portion of the survey. Respondents who had not interacted with Library goods or services in the past 12 months were provided the opportunity to respond regarding the gap in their interaction; about which services they were aware of and

about the types of changes that would encourage their return to use of Library goods and services.

In the field of contingent valuation, the topic of strategic behavior arises wherein respondents may opt for erroneous or misleading responses where outcomes - whether tangible (often monetary) or intangible - may hinge on survey results. The nature of this study, its focus area and its respondent universe suggest that strategic behavior essentially is not activated insofar as no respondents were in a position to benefit or experience disadvantage deriving from survey results. In short, this research compelled no weighing of cost (outside the choice situation) of alternative, false or misleading stated preferences or valuations against the gains directly related to the choice situation (in this case, assistance in generating meaningful, accurate information and insights on Library goods and services) (Mitchell, 1989; Akerlof, 1983).

In terms of the key facets of the methodological approach and their strengths, particular attention is given to matters inherent to the contingent valuation approach. Various forms of bias are addressed through specific steps in the approach or through the overall nature of the topics included. Nonresponse bias is considered to be overcome insofar as respondents approached have a natural familiarity with the amenity - in this case, library goods and services (Mitchell, 1989). Other response effects are controlled by means of distribution of electronic survey instruments not limited to any particular setting, administrator or other external influences. Randomizing question sequences within tree and branch ordering also reduced non-sampling error in regard to instrument design. The use of careful language, modeled according to recognized contingent valuation survey methods and other library cost-benefit study designs, allowed the instrument to present “the respondent with a well-defined situation and elicit a circumstantial choice contingent upon the occurrence of the posited situation” (Randall, Hoehn and Brookshire, 1983).

Contingent valuation allows for a variety of means of eliciting information from users and would-be users. The iterative method employed in this research serves as the most robust approach that conforms to the nature of use of goods and services and to the diversity of users, goods and services under consideration. Where willingness to pay is fashioned in a hypothetical construct, rather than in an actual record of monetized transaction, various discrete indicators of that activity are required. The combination of recorded activity of library usage by type with the survey process of establishing value provided for the necessary inputs to further economic cost-benefit modeling. The added feature of value iterations through follow-up options by survey respondents results in the most robust foundation of information obtainable for this research.

Table 3. Elicitation Methods in Contingent Valuation

	Actual Willingness to Pay Obtained	Discrete Indicator of Willingness to Pay Obtained
Single question	Open-ended/ Direct question Payment card Sealed bid auction	Take-it-or-leave it offer Spending question offer Interval checklist

Iterated series of questions	Bidding game Oral auction	Take-it-or-leave-it offer (with follow up)
------------------------------	------------------------------	--

(Mitchell, 1989)

The Williamson County Public Library patron survey measured each respondent’s overall use of a set of items. In other, similar surveys of library user activity, respondents were asked to identify the rate at which they used goods or services. This line of inquiry was followed by a question type that is conventional in contingent valuation approaches: “Suppose your library services were shut down indefinitely. How many of those items would you replace at the following cost?” The Williamson County Public Library patron survey adhered to this pattern of question. From an initial question regarding frequency of use of particular items in a typical month over the past 12 months, respondents were prompted with an estimated market value of each item established from popular, major consumer sources available to local households. Survey respondents were then given an opportunity to concur with the value estimation provided or to suggest another.

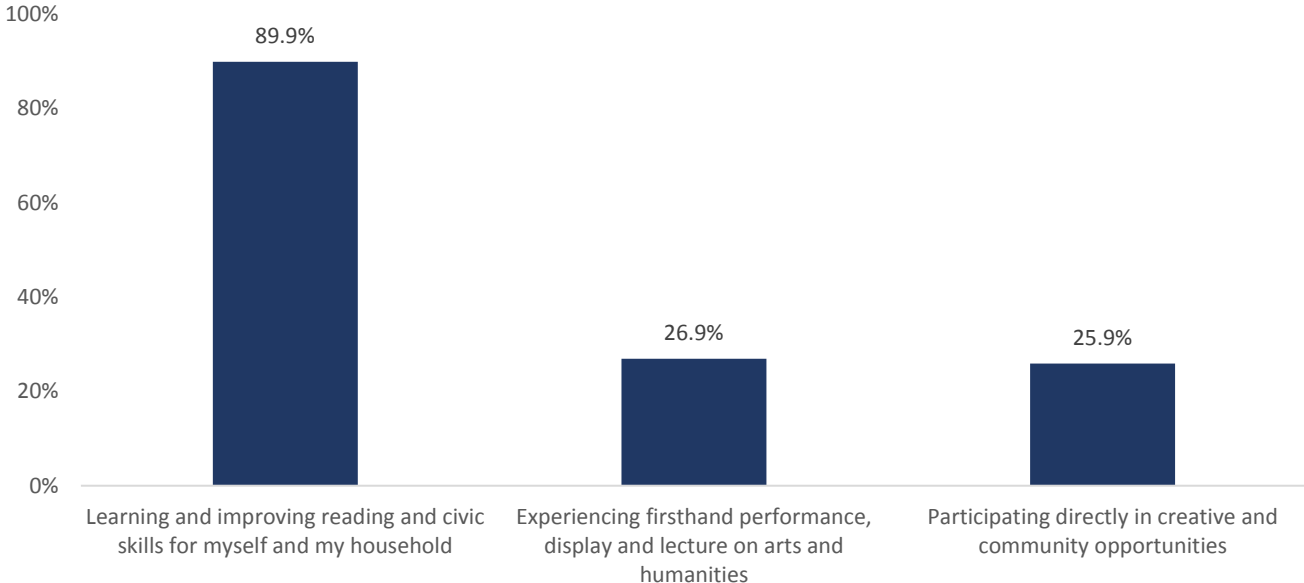
The resulting values that undergird the analysis are thus both market-based, in that they are also available for purchase outside the Library holdings, but are also responsive to user perception and understanding of value through options for alternatives to the market-based value. This ‘hybrid value’ then combines a strong foundation of input that reflects both a reality and a perception of value among county residents of Library goods and services. For example, approximately 20.6% of respondents who checked out printed Library books suggested an alternative valuation, with most identifying only slightly different levels of value. The hybrid value thus incorporated a weighted share for those responses that yielded alternate values.

Economic Impact Findings

The establishment of economic value of use by Williamson County residents of Williamson County Public Library goods and services lies at the heart of this study. Individuals and households are motivated for many reasons to access the Library as a resource. Both the longstanding and the emerging role of libraries drive a wide array of Library goods and services delivery that is responsive to users’ needs. The Library’s enhanced role as a convener and coalescing center for community and individual learning is demonstrated through the robust level of activity of Williamson County Public Library across its 6 locations.

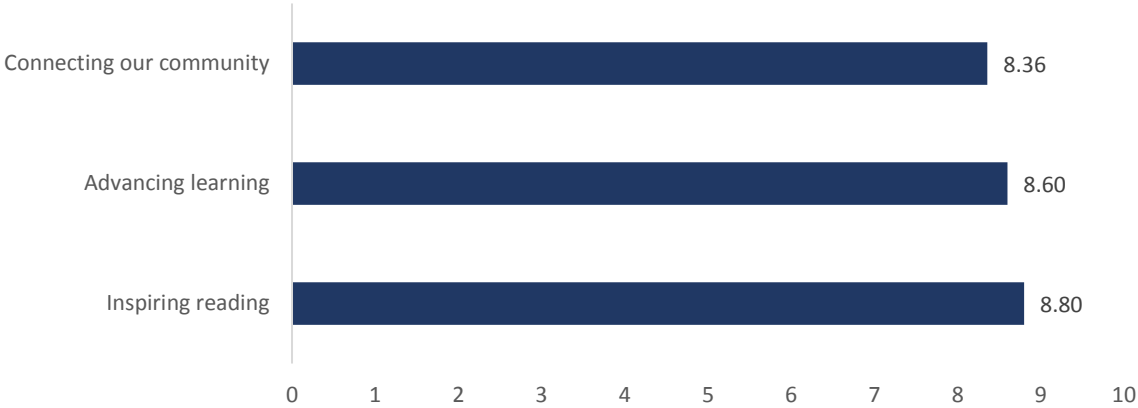
The historic role of libraries as repositories of written materials continues to flourish, as evidenced by the extensive and diverse collection of both print and electronic holdings at Williamson County Public Library. Not surprisingly, a full 89.9% of users identified reading as a central motivation for coming to the Library. However, more than 1 in 4 patrons noted that experiencing live performance, display or lecture stands as an important reason for their access of the Library. Another quarter of patrons found direct participation in creative and community experiences as a motivation for involvement with the Library system.

Figure 1. Reasons for Patron Visits to Williamson County Public Library



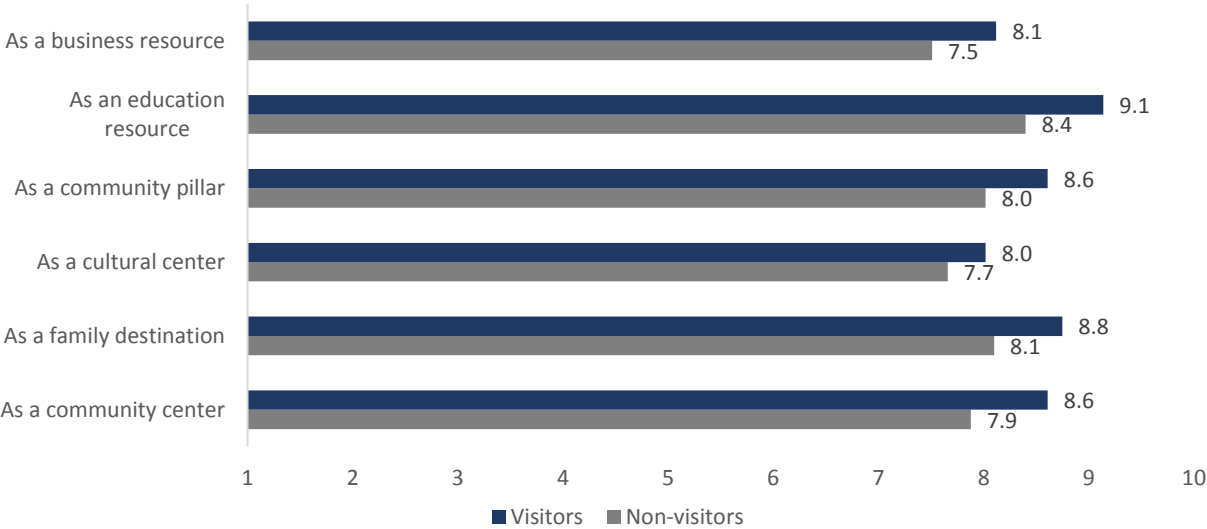
In the broadest terms, Williamson County Public Library performs well in how users perceive what the library delivers on services and goods that matter to those users. In conjunction with the motivations for accessing Library resources, one then notes the ways that a library achieves user-focused delivery. Response by patrons about the quality of the Library’s success in connecting the community, advancing learning and inspiring reading again demonstrate very strong levels of user satisfaction.

Figure 2. Patron Perception of Success of Williamson County Public Library in its Mission
 1= not successful at all and 10 = very successful



The performance of Williamson County Public Library, as seen through the responses of several thousand patrons, exemplifies very positive activity across the facets of the Library’s activity. Foremost, as a provider of resources for learning, the Library achieves highest ratings for that singular, hallmark role. However, the level of esteem for the quality of offerings of the Library was strong in all categories. While patrons who have not visited recently scored the library functions slightly lower, scores remain very positive.

Figure 3. Patron Perception of Functions and Levels of Williamson County Public Library
 1 = poor and 10 = excellent

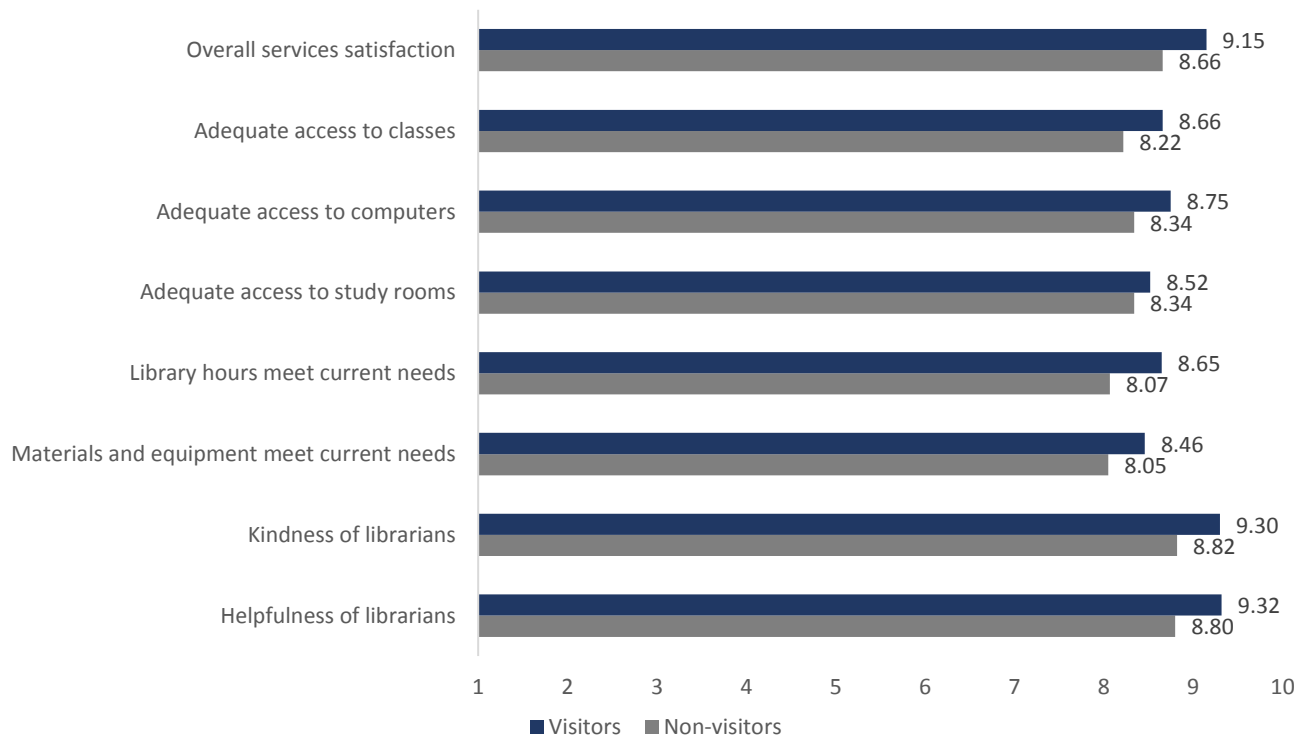


In a library system such as Williamson County’s, with many facilities and services, it is useful to gauge the public’s overall assessment of quality of performance. These measures serve to enhance understanding and corroboration of valuation survey methods, insofar as respondent pools ought to reflect a familiarity with the operations, goods and services with which they are presented for value estimation purposes. Overall, the performance ratings by the sizable respondent set presents a picture of high favorability. None of the ratings of the component

areas of Library service fell outside what could be deemed a ‘good’ or ‘very good’ range. Staff assistance particularly received strong positive ratings, along with computer access meeting the needs of users.

Figure 4. Perception of Patrons of Library Services

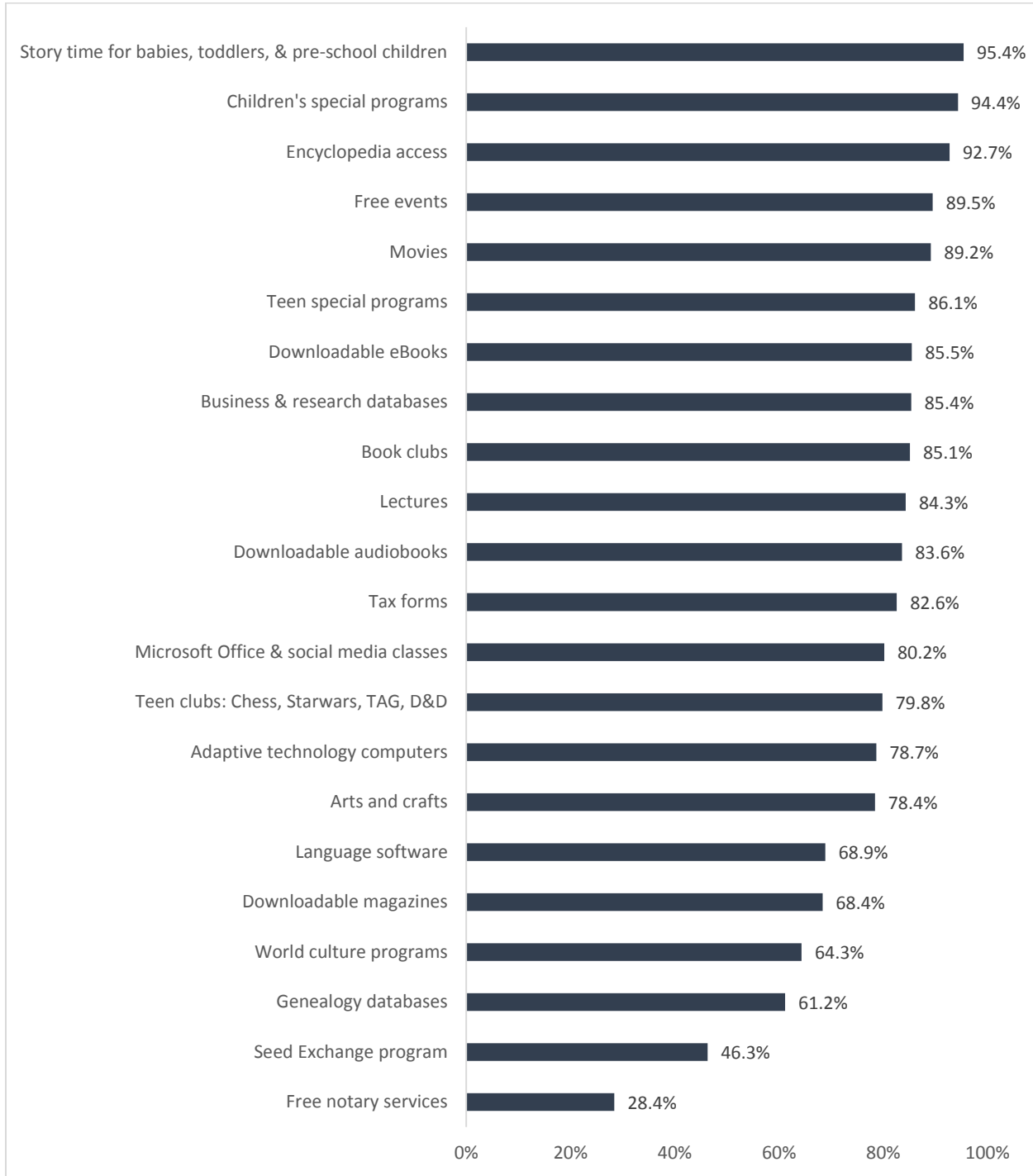
1 = poor and 10 = excellent



Clearly the overall perception of the Williamson County Public Library is strongly positive. Another way to evaluate the perceptions and loyalty of the library is through a tool used by retail businesses, known as the net promoter score. Through the survey, the community rated the library as an average 9.3 on net promoter question with a scale of 1 to 10. The net promoter score is then calculated by subtracting the percentage of detractors from the percentage of promoters, leaving passive customers out of the equation. The Public Library earned a 78.3 total net promoter score. While very different than a for-profit, when compared to most for profit industries, this score is extremely high.

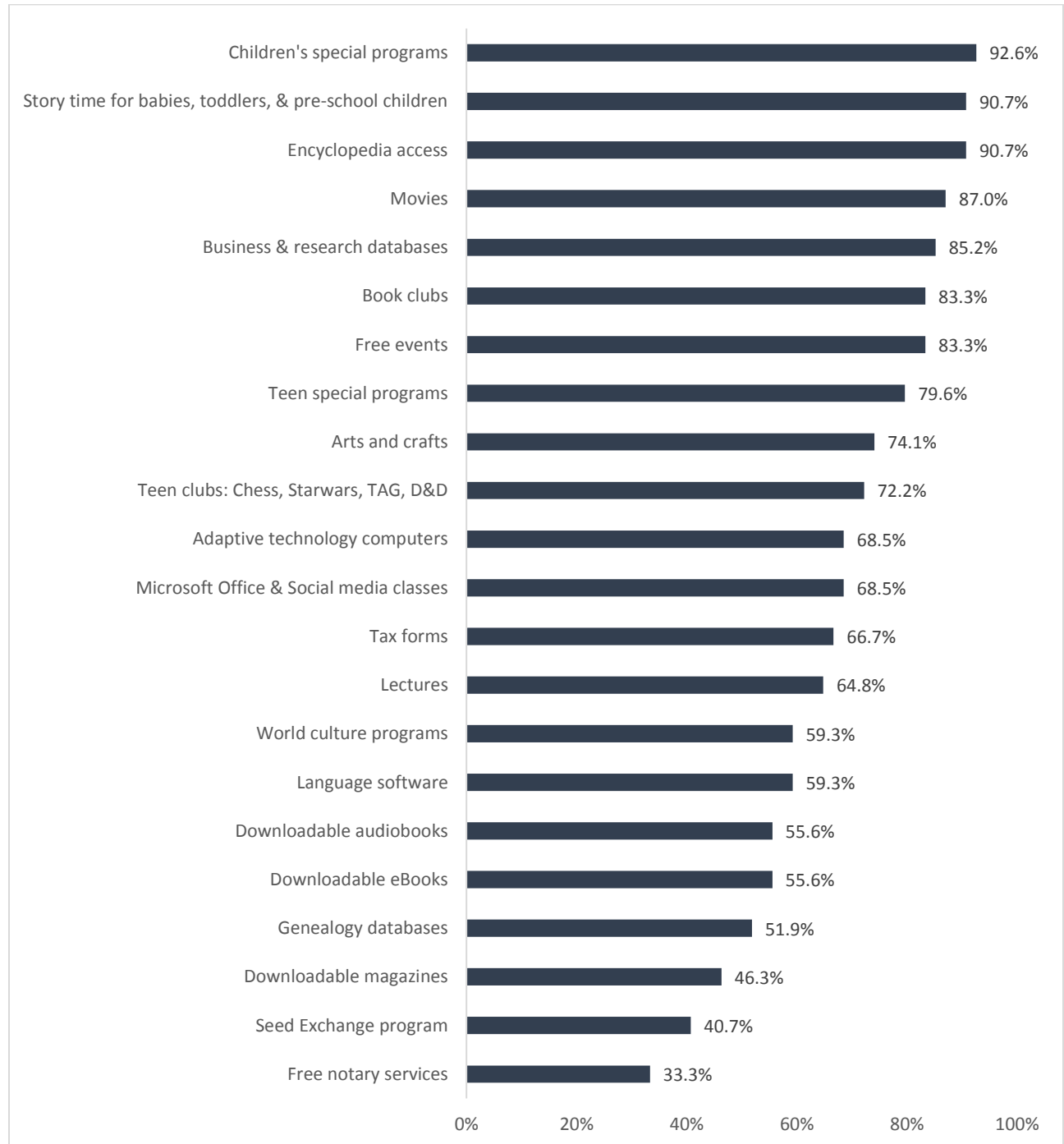
The diversity of programs offered by Williamson County Public Library responds to a very large range of interests. Unsurprisingly, some programs that focus on a need or interest of one portion of the population may be less sought after by other groups or even by the population at large. Thus, the strength of a large library system is to perform well in ways that support the needs of the broad population and also cultivate the interests of subgroups of the community. Visitors have a wide range of familiarity and unfamiliarity with various offerings, with a majority not knowing about notary and seed exchange services.

Figure 5. Rates at which Patrons are Aware of Williamson County Public Library Services, Visitors



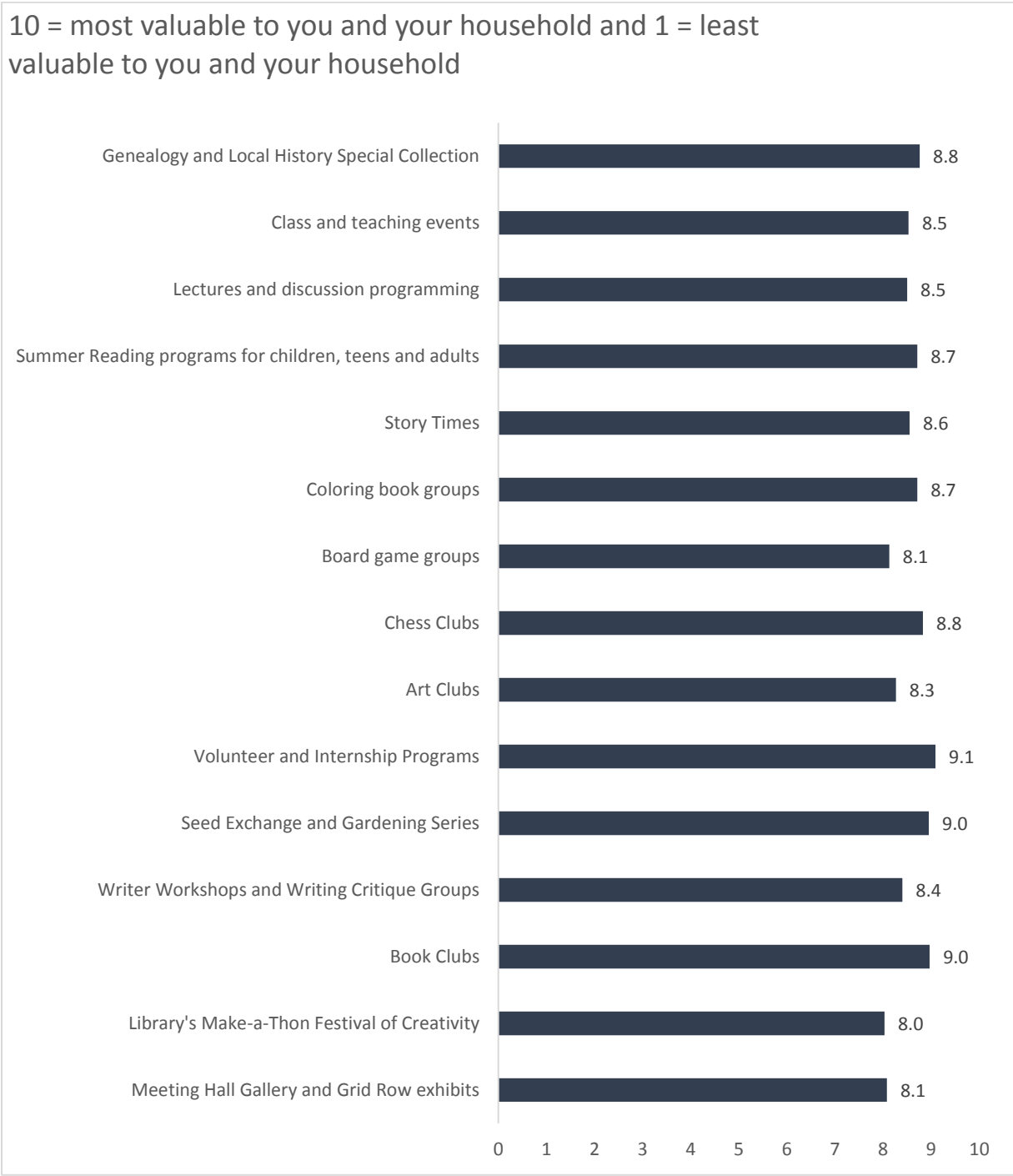
Similarly, patrons who have not visited the library in 12 months have a wide range of familiarity and unfamiliarity with programs. Overall, they are more familiar with notary services, but less familiar with everything else. These non-visitors reflect 4.8% percent of survey takers.

Figure 6. Rates at which Patrons are Aware of Williamson County Public Library Services, Non-visitors



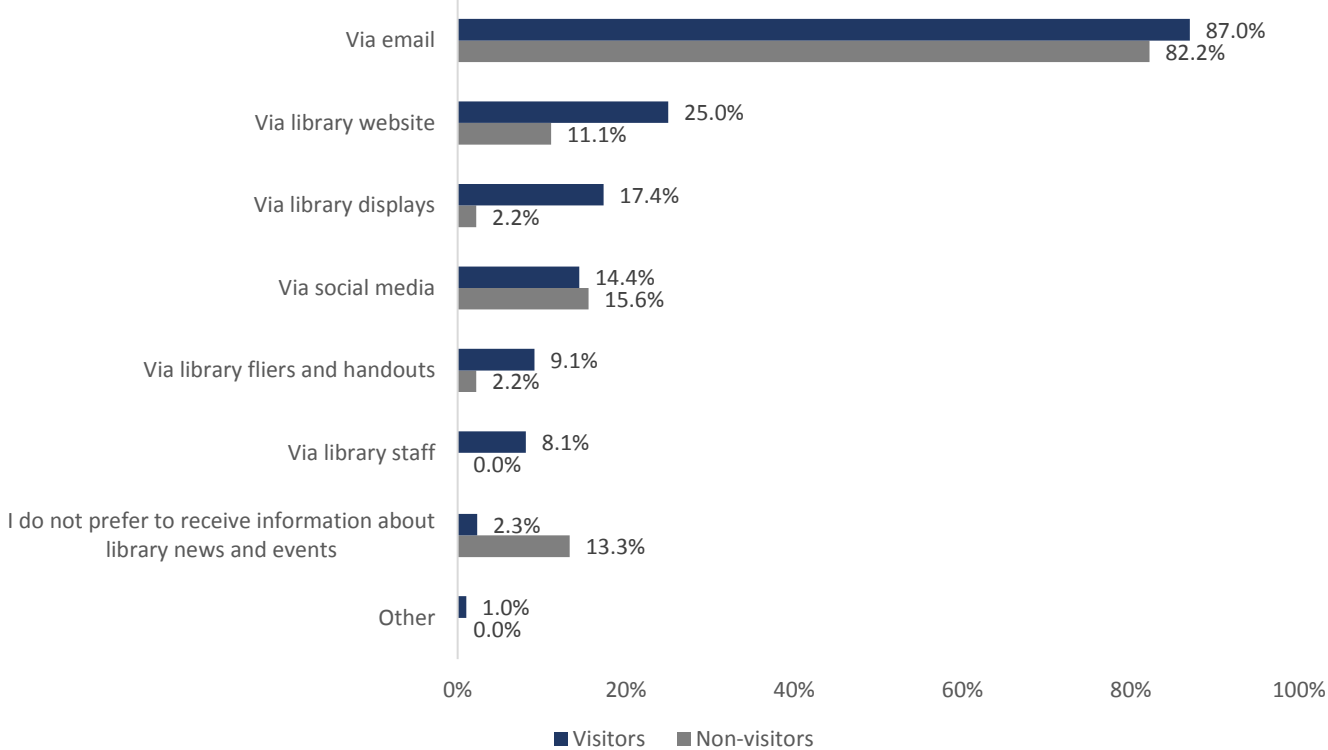
A key feature of the Library is its many distinctive programs. Large events like the Library’s Make-a-thon and regular programs like game groups and books clubs both provide tremendous value to the community. When asked about specific, unique programs, patron responses were uniformly very positive. During the interview process, community stakeholders noted other programs not measured in this study, like cook book clubs, were very highly regarded.

Figure 7. Perception of Value by Patrons? Attendees of the Library in Past 12 Months



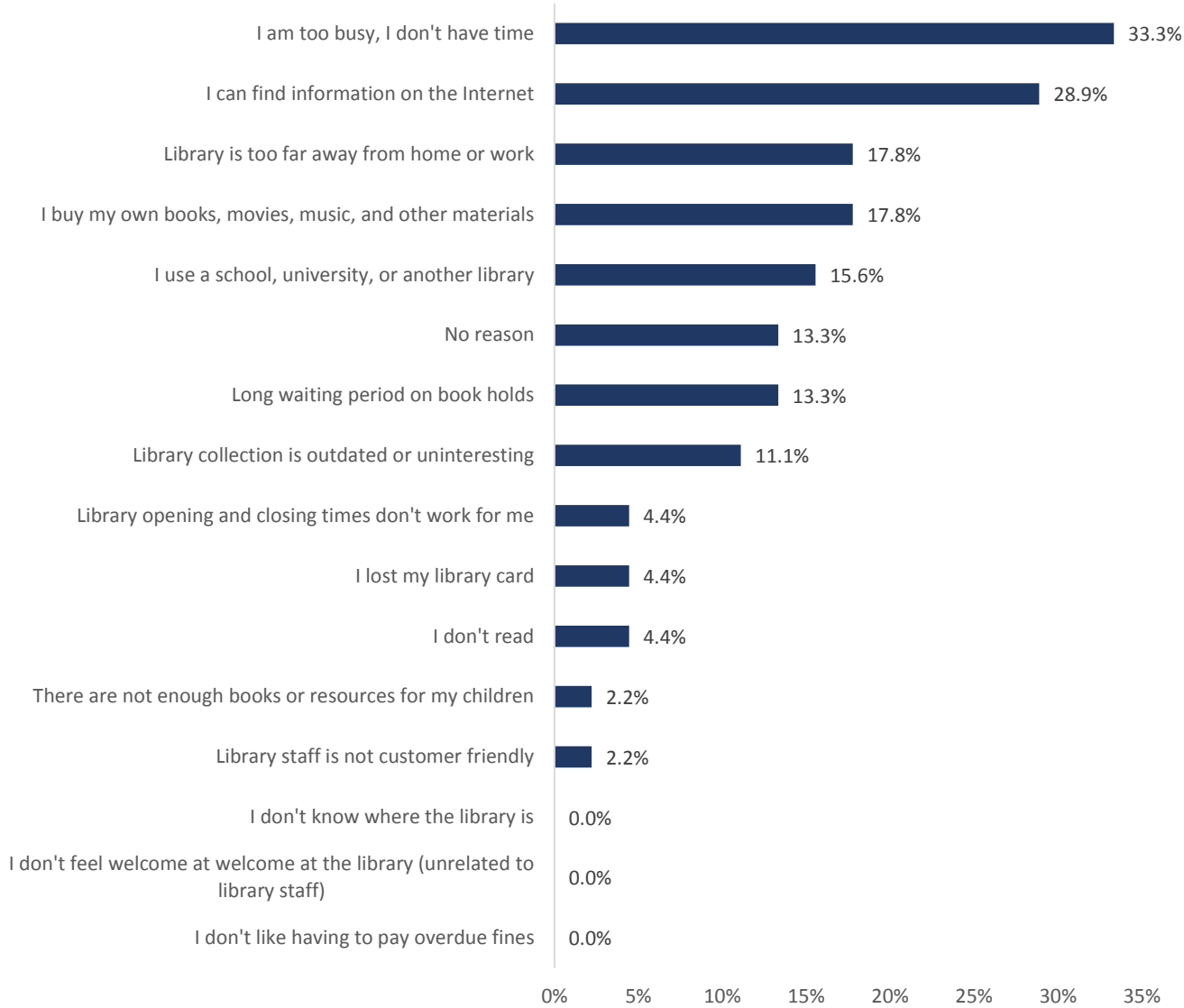
A key component of any library system is community engagement. How the library communicates to its patrons is critical in providing as many opportunities to the community as possible. Patrons of the Williamson County Public Library largely prefer to receive information about library news and events via email compared to other media. Visitors also like to receive news from the website, displays and some social media. Patrons who have not been to the library in the last 12 months are more likely not to hear about new library offerings and to prefer not to be contacted.

Figure 8. Attendees Preference of Communication from Library System



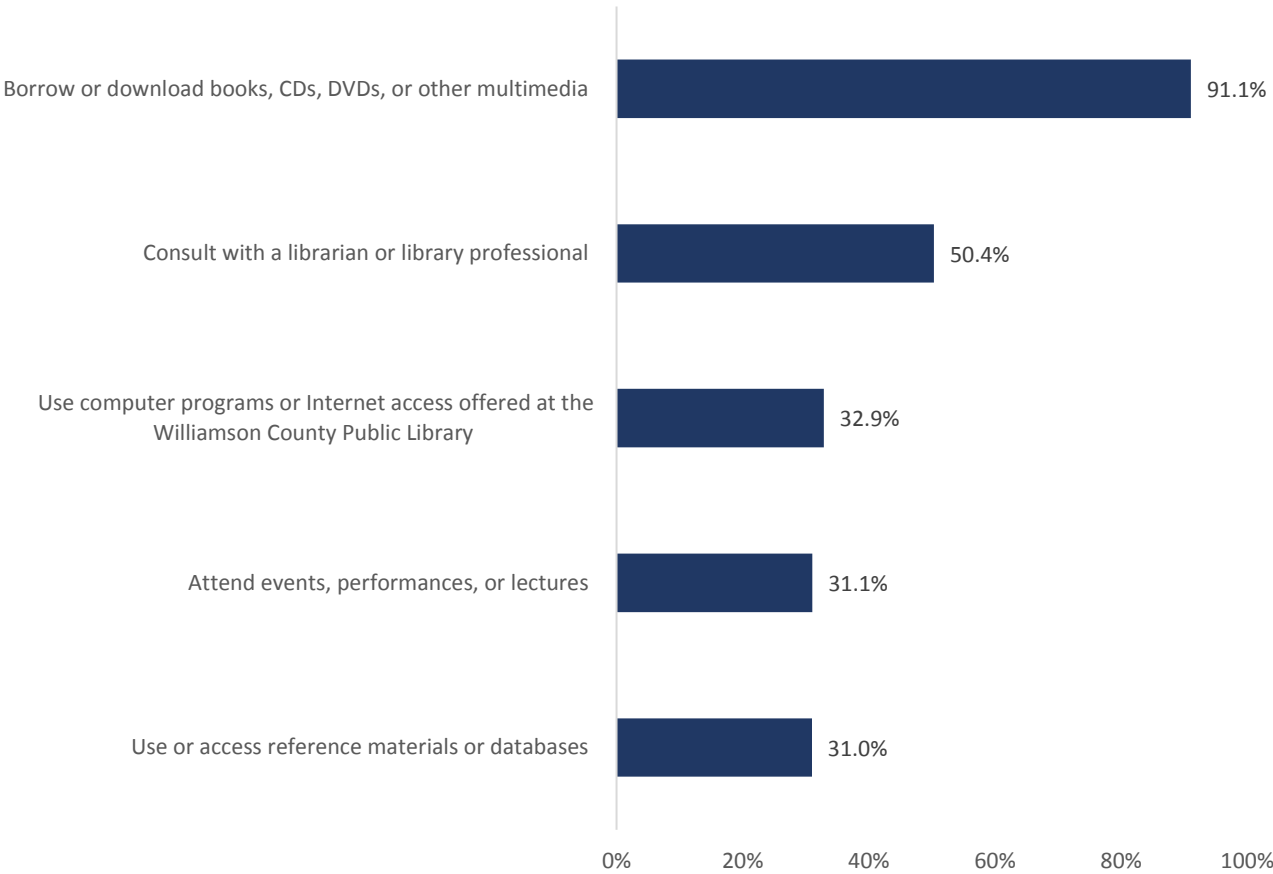
Survey respondents who had not been to the library were prompted to provide reasons why they have not been to a location in 12 months. Up to 3 options could be selected. One third of respondents felt they did not have time. Over 25 percent said they could find the information they needed on the internet. Library distance, long waiting periods, and lack of interest were also cited as reasons for not visiting the library.

Figure 9. Reasons Cited for Not Visiting Library Locations by Patrons



Patrons who have visited the library recently were prompted with this question. Ultimately, it routed survey takers into specific usage questions used in the cost-benefit analysis in the next section. Library’s value is largely provided by its access to books and other multimedia. Unsurprisingly, this service was used most often by respondents. However, we see that each category listed in the figure below are used by 30% or more of patrons.

Figure 10. Types of Services used by Visiting Patrons in the Last 12 Months



Cost-Benefit Analysis

Cost-benefit analysis serves as a key method for ascertaining the return on investment (ROI) for an activity. In this case, the ROI to Williamson County and its residents demonstrates a connection between budget expenditures and the resulting value that is realized by the population of the county. As described earlier as a methodological consideration, survey research aimed at contingent valuation provides an excellent means of establishing values for the public (or quasi-private) goods and services of the library system.

Survey respondents were those patrons and users who had been to the library within the past 12 months, adding a relevant current context to the ROI. Respondents were prompted to consider only those specific library categories and items accessed by their households.

Responses were for a self-generated number of uses in a typical month, rather than from a selection of options. This approach, known as a take-it-or-leave-it with follow-up method in survey literature, was used in modified form to gain efficiency with revealed preferences of respondents. Survey respondents were allowed to select designated market values of items or, in follow-up, to ascribe their own value to items. The result of these processes engaged a series of control rigors that ensure value estimation inputs are accurate for the time period and locale under consideration. Return on investment is predicated on the real outlays for providing goods and services, as well as on a meaningful understanding of the derived value recognized by recipients.

During the Williamson County Public Library 2015-2016 fiscal year, more than 800,000 physical library items were borrowed or accessed. Another 160,000 electronic materials were circulated. These usage statistics formed another core measurement of the total ROI that the Library generates for the county. Items were assigned value derived from the library patron survey administered and as described earlier in this report. Total estimated direct benefits are obtained from usage data combined with the hybrid valuation of each category of library goods and services.

The key findings on cost-benefit analysis reveal:

- Total direct benefit of the Williamson County Public Library system to the community is \$8.16 million
- The market value of Library services in Williamson County is \$38.59 per capita
- The ROI of Williamson County Public Library to the county is \$4.02 for every \$1.00 of expenditure for the Library system.

Table 4. Cost-Benefit of Overall Williamson County Public Library to Users

Total estimated direct benefit	\$8,168,007
Williamson County Public Library FY 15-16 budget expenditure	\$2,030,082
Williamson County Public Library service area population	211,672
Market value or services per capita	\$38.59
Williamson County Public Library Expenditure per capita	\$9.59
Direct benefits per \$1 spent	\$4.02

A variety of approaches was used in soliciting input from library patrons and users, which allowed for several ways of understanding how those individuals perceive value both personally and to their households. A particularly important measure of this value involves identification of an annualized value of household savings that accrue from ability to access library resources and programs. Williamson County Public Library demonstrates the ways a contemporary library serves in a host of service fields for learning and activity, so it is clear that real value is discernable for these. From those values established by users themselves through the survey process, combined with detailed data on user activity maintained by the library system, it is possible to determine a value of potential average monetary savings that accrues to area households. Relying on a series of inputs relating to user profiles weighted by type, volume and monetized volume of activity, a composite household economic advantage associated with the library emerges.

Total Average Annual Savings to Typical Patron Household	\$ 2,574.16
--	-------------

In short, the patron household using the services and holdings of Williamson County Public Library on average realizes annual savings of some \$2,574. As an example, the patron household achieves savings of over \$800 annually through access of print books and selected other printed materials and over \$250 in savings of purchase of audio-visual materials, such as CDs and DVDs.

Table 7. Average Usage of Major Library Materials by Type

Item	Average Monthly Usage by Patrons	Average Annual Usage by Patrons
Books, print	5.2	62.4
Children's books, print	4.6	55.2
CDs, DVDs, or other multimedia, print	1.9	22.8
Books, Digital/ Streaming	1.8	21.6
Computer and Internet access	0.9	10.8
Assistance with other research (not school or business related)	0.3	3.6
Reference materials, print	0.3	3.6
Magazines, print	0.2	2.4
CDs, DVDs, or other multimedia, Digital/ Streaming	0.2	2.4

Conclusions

Emerging from popular demand and established through volunteer and charitable organizations, Williamson Public Library has been a key, singular type of anchor for Williamson County and Middle Tennessee. Quality of place and quality of life matter to residents of a community, and Williamson County residents have, time and again, expressed support and affirmation for the role of their Library in providing an array of facilities, staff, resources and programs. As the 21st Century progresses, Williamson County Public Library continues to expand the ways it fulfills its mission of outstanding service to the county's residents. Williamson County's environment offers opportunities for residents and businesses alike. A constant focus on continuous enhancement of learning and experiences in all fields are not merely pleasant amenities for this institution; rather, this dedication to enriching of the lives of citizens, workers, leaders and learners is an imperative the community has strongly embraced. The pivotal role of Williamson County Public Library is unrivalled across the breadth and depth of the community, its needs and its interests.

But the importance of the Library's role is not only anecdotal and narrative in quality. This opportunity to consider the economic value of a library system is equally critical to assessing the realized gains that the county and its residents achieve from investments that allow the Library to serve at the high level it does. Return on investment provides one incontrovertible set of metrics that gives meaning to the ways in which libraries serve educational and enrichment roles, which have deep and long-lasting effects on people's lives.

Key points drawing from the study of Williamson County Public Library highlight the ways it delivers important and far-reaching returns to the county:

- Williamson County Public Library makes a sizeable contribution to the county's economic well-being, with **market value of services nearing \$38.59 per capita and with direct benefit to the community totaling more than \$8 million.**
- With a wide range of programs, services and facilities, Williamson County Public Library's **return on investment to the county is \$4.02 for every \$1.00 of expenditure** for the Library system.
- Patrons and users of the Library express **enthusiastic support for the quality and diversity of programs, including overall rating of 9.2 excellence on 10-point scale for library services**, with additional high ratings for staff helpfulness and materials and equipment meeting user needs.
- The community sees the library as a useful institution in the community, rating it an average **9.3** on net promoter score. The total score is **78.3**.
- Library users demonstrate **high confidence in the Library's fulfillment of its mission**, with a range of 8.4 to 8.8 excellence in inspiring reading, advancing learning and connecting the community.

- The Library leads the way across the community 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.

In short, the Williamson County Public Library puts to effective and innovative use its investments and resources, making a real difference in people's lives. Dollars spent to ensure the county's Library system takes a leadership role in education, culture, entertainment and civic activities pay dividends that are measurable and significant. The Williamson County Public Library system exemplifies through its work the meaning of a true community center, for it serves as a community center through its facilities, programs, and outreach in countless ways. This study comprises comprehensive research, which showcases in both qualitative and quantitative terms the value realized by this vital institution and its work.

Bibliography

Akerlof, G.A. (1983) Loyalty Filters. *American Economic Review*. 73:54-63.

American Library Association. (2013). *State of America's Libraries Report 2012*. Retrieved from <http://www.ala.org/news/mediapresscenter/americaslibraries/soal2012>

Anderson, K.E. and Cvetkovic, V.B, Eds. (2015). *Reinventing Reference: How Libraries Deliver Value in the Age of Google*. Chicago: American Library Association

Barron, Daniel D., Robert V. Williams, Stephen Bajjalay, Jennifer Arns, and Steven Wilson. *The Economic Impact of Public Libraries on South Carolina*, a study prepared for the University of South Carolina, January 2005.

Berk and Associates. (2007). *Providing for Knowledge, Growth, and Prosperity: A Benefit Study of the San Francisco Public Library*, a study prepared for the Friends of the San Francisco Public Library.

Bowker Annual of Library and Book Trade Information 54th Ed. (2009) New York: Council of National Library Associations.

Brookshire, D.S. and Eubanks, L.S. (1978). Contingent Valuation and Revealing Actual Demand for Public Environmental Commodities, manuscript, University of Wyoming.

Carnegie Mellon University Center for Economic Development. *Carnegie Library of Pittsburgh Community Impact and Benefits*, a study prepared for Carnegie Mellon University, April 2006.

Decker, S.D. (2009). *Economic Impact of Utah Libraries: Pilot Study*. Retrieved from <http://library.utah.gov/about/publications.html>

Elliot, Donald S., Glen E. Holt, Sterling W. Hayden, and Leslie Edmonds Holt. (2007) *Measuring Your Library's Value: How to Do a Cost-Benefit Analysis for Your Library*. Chicago: American Library Association.

Elliot, Glen E., Donald Elliot, and Amonia Moore. *Placing a Value on Public Library Services*. St. Louis Public Library. Web. August 2009. <<http://www.slpl.lib.mo.us/libsrc/restoc.htm>>.

Griffiths, Jose-Marie et al. *Taxpayer Return on Investment in Florida Public Libraries: Summary Report*, a study prepared for the State Library and Archives of Florida, September 2004. <<http://dlis.dos.state.fl.us/bld/roi/2004-ROI.cfm>>.

Hider, Philip. (2008) "Using the Contingent Valuation Method for Dollar Valuations of Library Services." *Library Quarterly* 78:437-458.

Holt, G. E., Elliott, D., and Moore, A., (1999). *Placing a value of public library services*. Retrieved from <http://www.slpl.lib.mo.us/libsrc/rescba.htm>

Kamer, Pearl M. *Placing an Economic Value on the Services of Public Libraries in Suffolk County, New York*, a study prepared by the Long Island Association, June 2005. <<http://scls.suffolk.lib.ny.us/pdf/librarystudy.pdf>>.

Louviere, J.J., Hensher, D.A., and Swait, J.D. (2000). *Stated Choice Methods: Analysis and Application*. Cambridge: Cambridge University Press.

Mitchell, R.C. and Carson, R.T. (1989) Using Surveys to Value Public Goods: The Contingent Valuation Method. Washington: Resources for the Future.

Palfrey, J. (2015). *Biblio Tech: Why Libraries Matter More than Ever in the Age of Google*. New York: Basic Books.

Randall, A, Hoehn. J.P., and Brookshire, D.S. (1983). Contingent Valuation Surveys for Evaluating Environmental Assets. *Natural Resources Journal*. 23:635-348.

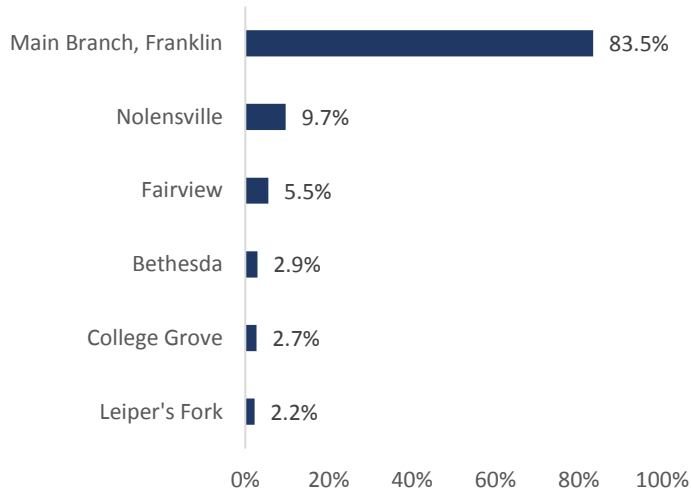
The University of North Carolina at Charlotte Urban Institute. (2010). *A Return on Investment Study of the Charlotte Mecklenburg Library 2010*. Retrieved from <http://ui.uncc.edu/story/return-investment-study-charlotte-mecklenburg-library-2010>

Salt Lake County Library Services. (2013). *A Return on Investment Study of Salt Lake County Library Services*. Retrieved from <<http://www.slcolibrary.org/ql/qlal/pdf/slclsroistudy2013.pdf>>

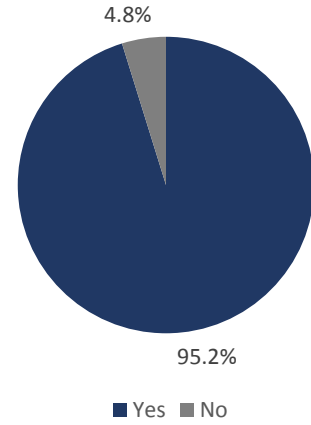
U.S. Census Bureau, 2015 American Community Survey 1-Year Estimates, Williamson County Age and Sex

SURVEY AND COMMUNITY DEMOGRAPHICS

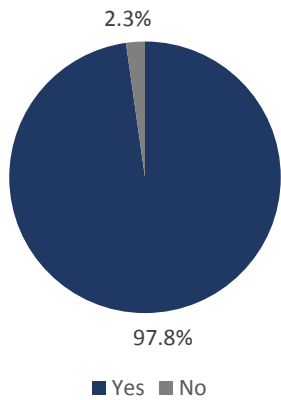
Which library locations do you visit most often?



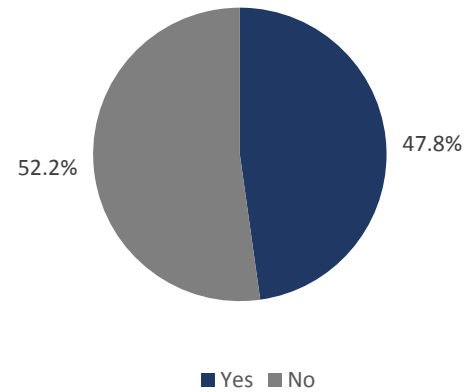
In the past 12 months, have you used any library service provided by the Williamson County Public Library?



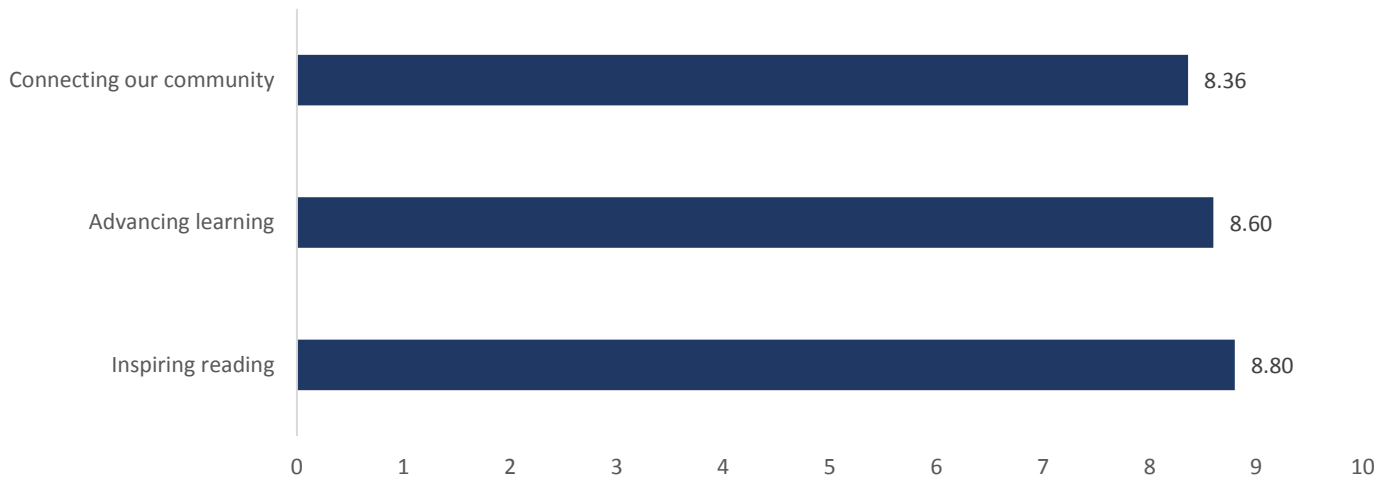
Does your household have an internet connection at home?



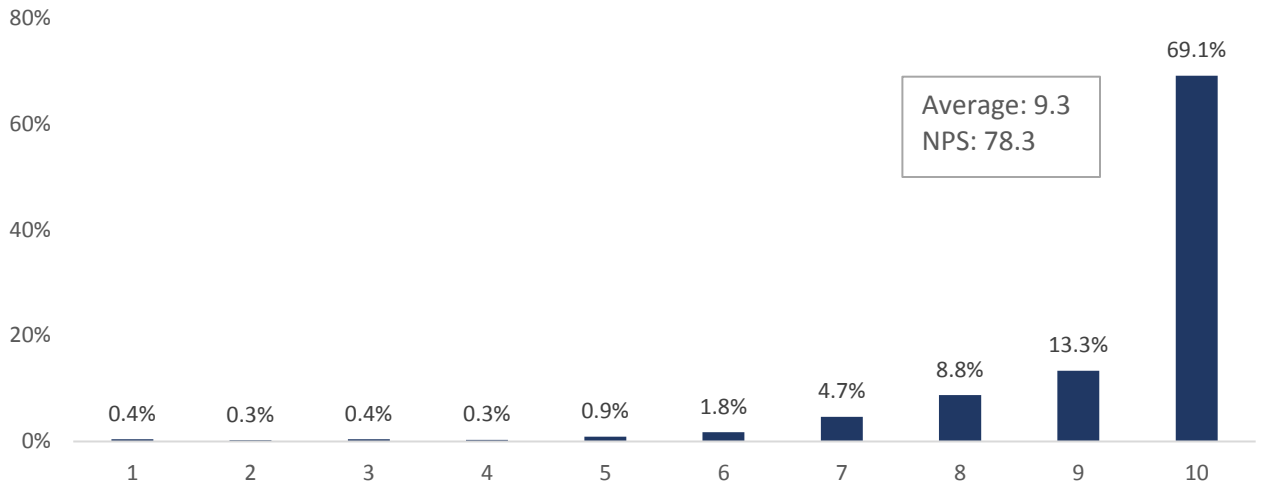
Do you have children under 18 in your household?



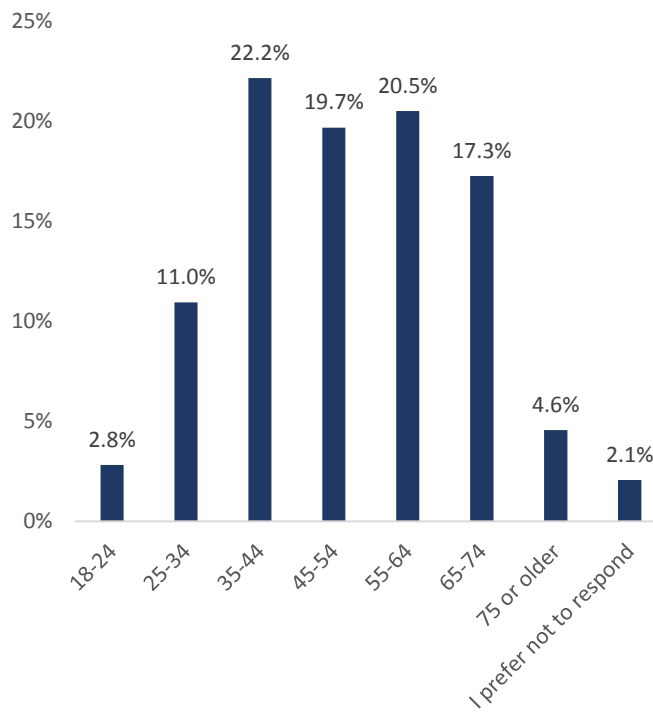
How successful is the Williamson County Public Library based on the following indicators? Please rate on a scale of 1 to 10 where 1 is not successful at all and 10 is very successfully.



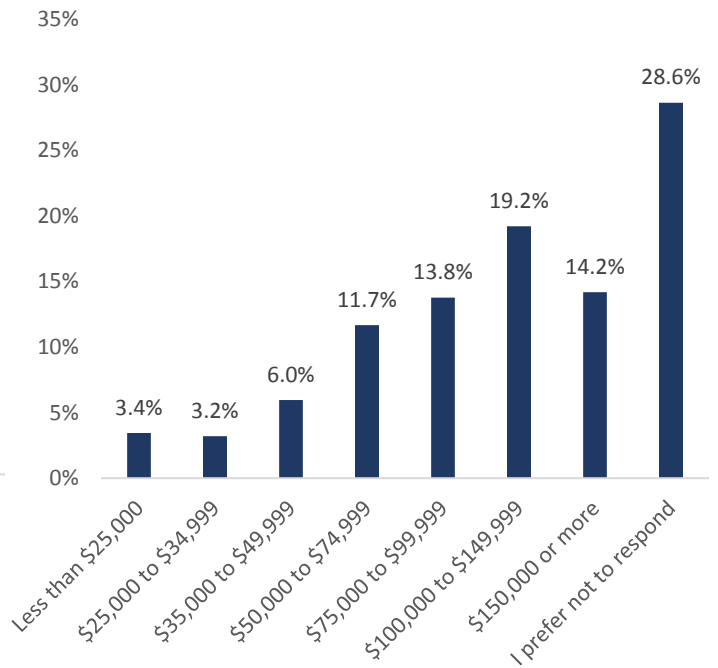
How likely are you to recommend the Williamson County Public Library to a friend or colleague?



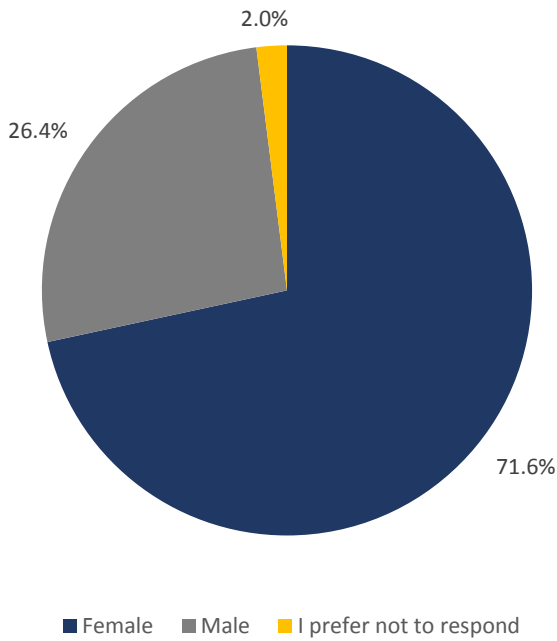
What is your age?



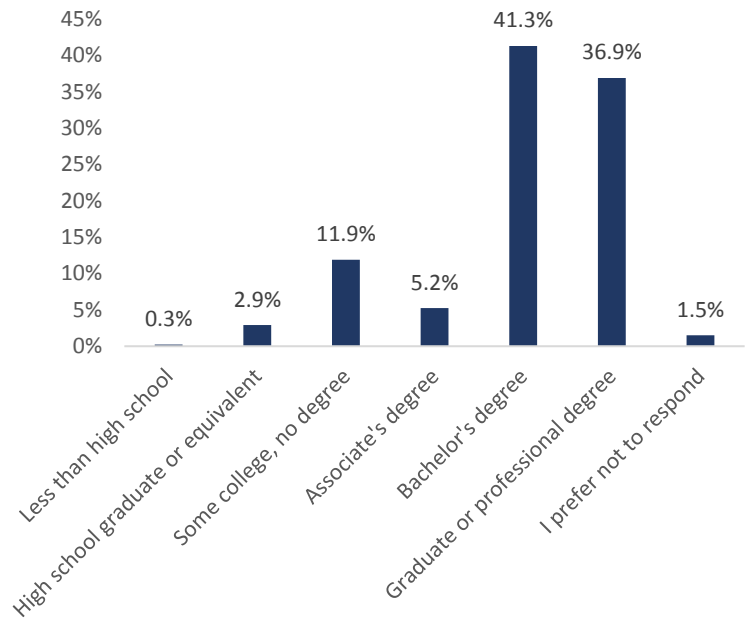
What is your household income?



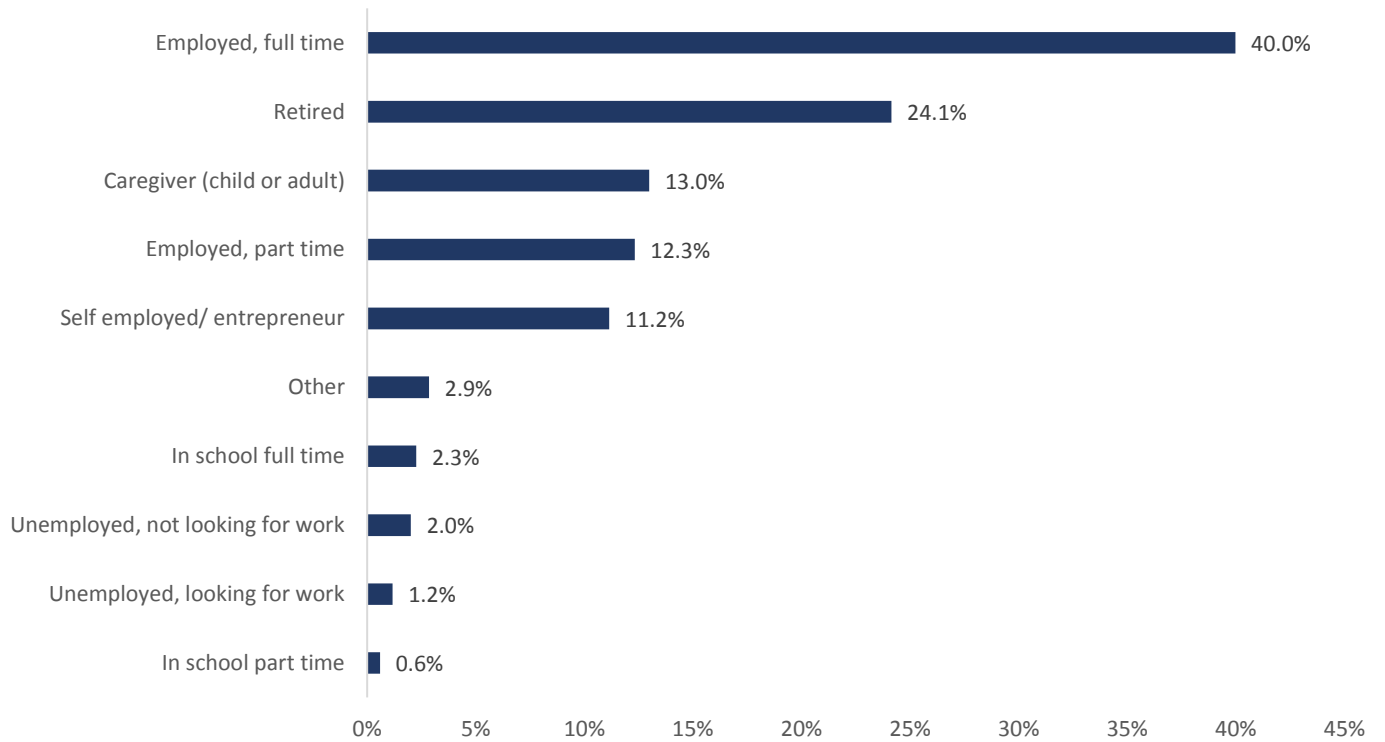
What is your gender?



What level of education have you attained?

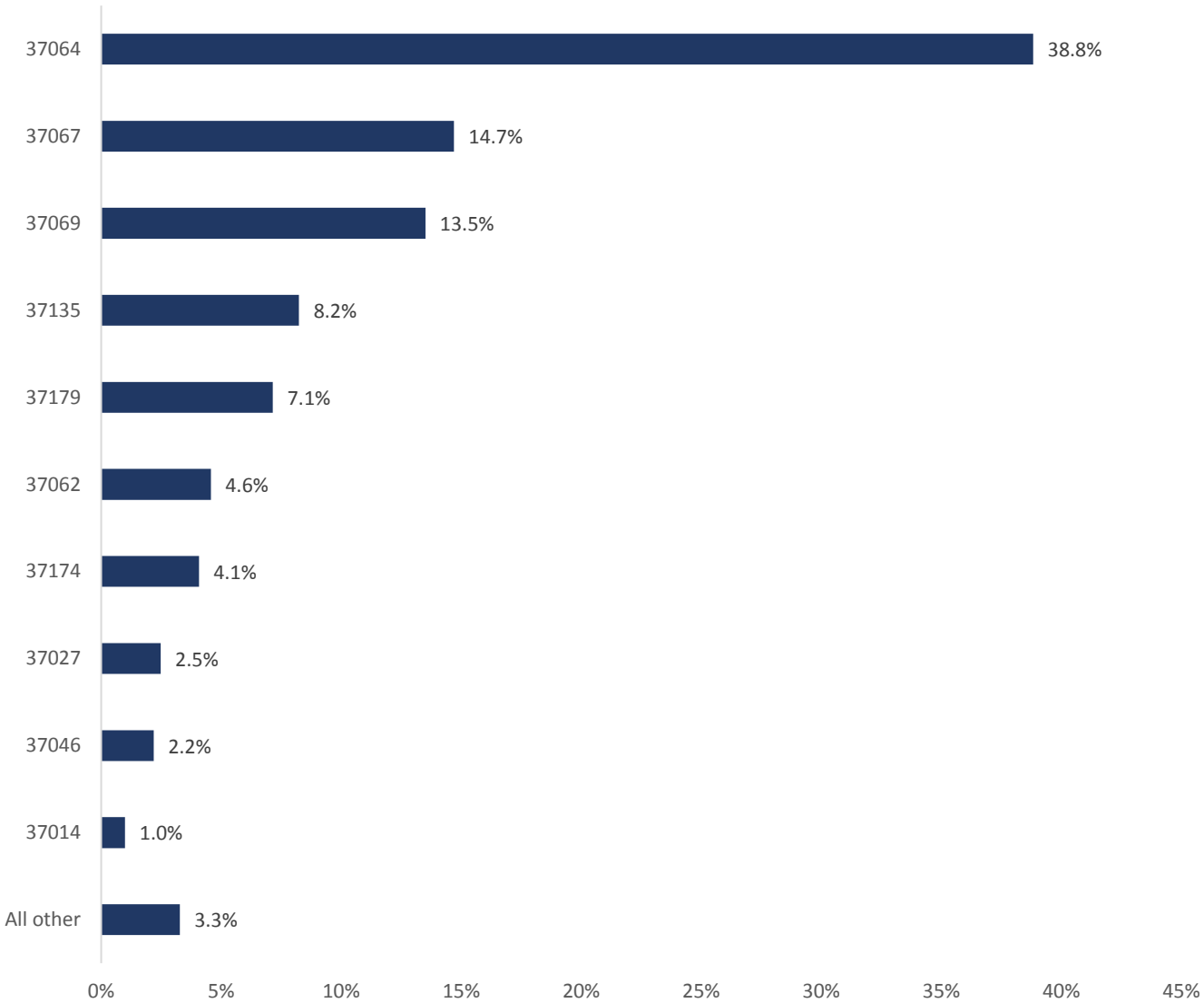


Which of the following best describes you?



*Other includes home educators, stay at home mothers, homemakers, etc

What zip code do you currently live in?



APPENDICIES

Appendix A: Williamson County Public Library Total Library Usage Data for Cost-Benefit Analysis

Library Statistics Information	Usage totals and estimates FY 15-16	Total Estimated Value (\$)
Books, print	178,804	\$ 2,381,664
Books, Digital/ Streaming	86,658	\$ 682,862
Newspapers, print	501	\$ 1,001
Newspapers, Digital/ Streaming	2,246	\$ 2,898
Magazines, print	2,061	\$ 10,882
Magazines, Digital/ Streaming	1,733	\$ 7,226
CDs, DVDs, or other multimedia, print	28,737	\$ 327,027
CDs, DVDs, or other multimedia, Digital/ Streaming	52,477	\$ 506,928
Reference materials, print	4,984	\$ 146,125
Reference materials, Digital/ Streaming	16,086	\$ 308,690
Children's books, print	60,859	\$ 517,913
Children's books, Digital/ Streaming	12,172	\$ 34,812
Academic or professional journals, print	1,679	\$ 82,410
Academic or professional journals, Digital/ Streaming	839	\$ 32,685
Assistance with other research (not school or business related)	7,137	\$ 80,505
Tutoring, homework help, or other educational needs	5,064	\$ 56,966
Research assistance with business related research	3,000	\$ 35,310
Computer and Internet access	83,774	\$ 1,455,149
Use of language learning software	1,459	\$ 125,867
Use of Microsoft office programs	4,378	\$ 233,609
Playing computer games	23,272	\$ 120,085
Accessing research databases	4,000	\$ 186,120
Accessing business databases	9,000	\$ 392,580
Accessing genealogy databases	1,741	\$ 34,176
Accessing legal resources	3,000	\$ 87,300
Microsoft Office training	600	\$ 91,422
Computer usage training	567	\$ 18,881
Job search labs	250	\$ 1,183
Story times	10,326	\$ 63,195
After school programs for youth	2,226	\$ 46,323
Puppet shows	400	\$ 2,524
Concerts	1,000	\$ 18,740
Lectures	1,000	\$ 11,120
Other events	5,735	\$ 63,827
Total estimated direct benefits		\$ 8,168,007
Williamson County Public Library service area population		\$ 211,672

Market value or services per capita	\$	38.59
Williamson County Public Library FY 15-16 Budget expenditure	\$	2,030,082
Williamson County Public Library Expenditure per capita	\$	9.59
Direct benefits per \$1 spent	\$	4.02

Appendix B: Williamson County Public Library Average Annual Household Savings to Library Patrons

Summary of Annual Savings	Annual Household Savings per item
Library materials-Books-print	\$ 826.74
Library materials-Books-Digital/ Streaming	\$ 169.41
Library materials-Newspapers-print	\$ 1.85
Library materials-Newspapers-Digital/ Streaming	\$ 0.27
Library materials-Magazines-print	\$ 23.31
Library materials-Magazines-Digital/ Streaming	\$ 7.88
Library materials-CDs, DVDs, or other multimedia-print	\$ 254.94
Library materials-CDs, DVDs, or other multimedia-Digital/ Streaming	\$ 77.06
Library materials-Reference materials-print	\$ 101.58
Library materials-Reference materials-Digital/ Streaming	\$ 10.98
Library materials-Children's books-print	\$ 465.69
Library materials-Children's books-Digital/ Streaming	\$ 5.34
Library materials-Academic or professional journals-print	\$ 158.52
Library materials-Academic or professional journals-Digital/ Streaming	\$ 19.74
Assistance with other research (not school or business related)	\$ 36.73
Tutoring, homework help, or other educational needs	\$ 13.68
Research assistance with business related research	\$ 28.55
Computer and Internet access	\$ 37.49
Use language learning software	\$ 16.92
Use Microsoft office programs	\$ 30.53
Playing games	\$ 9.20
Accessing research databases	\$ 46.40
Accessing business databases	\$ 17.11
Accessing genealogy databases	\$ 10.75
Accessing legal resources	\$ 6.19
Microsoft Office training	\$ 66.01
ESL or other language classes	\$ 6.13
Computer usage training	\$ 16.88
Job search labs	\$ 8.79
Story times	\$ 15.57
After school programs for youth	\$ 13.70
Puppet shows	\$ 3.97
Concerts	\$ 13.94
Lectures	\$ 14.82
Other events	\$ 25.92
Total Average Annual Savings	\$ 2,562.59

Appendix C: Average Monthly Household Usage of Items at Williamson County Public Library by Library Patrons

Item	Average Monthly Household Usage by Library Patrons	Average Per Person Usage by County Residents
Books - Physical	5.17	0.84
Children's books - Physical	4.56	0.29
CDs, DVDs, or other multimedia - Physical	1.87	0.14
Books - Digital/ Streaming	1.79	0.41
Computer and Internet access	0.91	0.40
Magazines - Physical	0.37	0.01
Reference materials - Physical	0.32	0.02
Assistance with other research (not school or business related)	0.27	0.03
Accessing research databases	0.24	0.02
CDs, DVDs, or other multimedia - Digital/ Streaming	0.23	0.25
Story times	0.21	0.05
Other events	0.19	0.03
Use Microsoft office programs	0.17	0.02
Magazines - Digital/ Streaming	0.16	0.01
Children's books - Digital/ Streaming	0.16	0.06
Playing games	0.15	0.11
Accessing genealogy databases	0.14	0.01
Research assistance with business related research	0.12	0.01
Lectures	0.11	0.00
Tutoring, homework help, or other educational needs	0.10	0.02
Academic or professional journals - Physical	0.10	0.01
Accessing business databases	0.08	0.04
Newspapers - Physical	0.08	0.00
Concerts	0.06	0.00
After school programs for youth	0.06	0.01
Puppet shows	0.05	0.00
Reference materials - Digital/ Streaming	0.05	0.08
Finding jobs, career help	0.04	0.00
Academic or professional journals - Digital/ Streaming	0.04	0.00
Use language learning software	0.04	0.01
Microsoft Office training	0.04	0.00
Accessing legal resources	0.03	0.01
Computer usage training	0.02	0.00
Newspapers - Digital/ Streaming	0.02	0.01
ESL or other language classes	0.01	-

Appendix D: Market and Hybrid Valuation Sources and Notes

Library Service	Market Value	Hybrid Value	Unit	Market value source	Notes
Books, print	\$14.00	\$13.32	per item	Estimates from: http://www.amazon.com/ http://www.barnesandnoble.com/ http://www.parnassusbooks.net/ http://www.booksamillion.com/	-
Books, Digital/ Streaming	\$8.00	\$7.88	per item	Estimates from: http://www.amazon.com/ http://www.barnesandnoble.com/ http://www.parnassusbooks.net/ http://www.booksamillion.com/	-
Newspapers, print	\$2.00	\$2.00	per item	Print subscription to the Tennessean: http://www.tennessean.com/	No change from market value
Newspapers, Digital/ Streaming	\$1.00	\$1.29	per item	Digital subscription to the Tennessean: http://www.tennessean.com/	-
Magazines, print	\$5.00	\$5.28	per item	Estimates from: http://www.amazon.com/ http://www.barnesandnoble.com/ https://www.kroger.com/	Estimates based on singular magazine purchases and subscriptions.
Magazines, Digital/ Streaming	\$4.00	\$4.17	per item	Estimates from: http://www.amazon.com/ http://www.barnesandnoble.com/ https://www.kroger.com/	Estimates based on singular magazine purchases and subscriptions.
CDs, DVDs, or other multimedia, print	\$12.00	\$11.38	per item	Estimates from: http://www.amazon.com/ http://www.bestbuy.com/ http://www.fye.com/	Includes music, movies, and audiobooks
CDs, DVDs, or other multimedia, Digital/ Streaming	\$10.00	\$9.66	per item	Estimates from: http://www.amazon.com/ http://www.bestbuy.com/ http://www.fye.com/	Includes music, movies, and audiobooks. Also considers subscription and streaming services as well as singular song purchases
Reference materials, print	\$30.00	\$29.31	per item	Estimates and price list from: http://www.oxfordjournals.org/ http://www.jstor.org/ http://www.lexisnexis.com/ http://www.thomsonreuters.com/	-
Reference materials, Digital/ Streaming	\$20.00	\$19.19	per item	Estimates and price list from: http://www.oxfordjournals.org/ http://www.jstor.org/ http://www.lexisnexis.com/ http://www.thomsonreuters.com/	-
Children's books, print	\$9.00	\$8.51	per item	Estimates from: http://www.amazon.com/ http://www.barnesandnoble.com/ http://www.parnassusbooks.net/ http://www.booksamillion.com/	-

Library Service	Market Value	Hybrid Value	Unit	Market value source	Notes
Children's books, Digital/ Streaming	\$3.00	\$2.86	per item	Estimates from: http://www.amazon.com/ http://www.barnesandnoble.com/ http://www.parnassusbooks.net/ http://www.booksamillion.com/	-
Academic or professional journals, print	\$50.00	\$49.09	per item	Estimates and price list from: http://www.oxfordjournals.org/	Cost heavily fluctuate based on journal accessed. Discounts are applied to library users assuming bulk use
Academic or professional journals, Digital/ Streaming	\$40.00	\$38.94	per item	Estimates and price list from: http://www.oxfordjournals.org/ http://www.jstor.org/	-
Assistance with other research (not school of business related)	\$10.00	\$11.28	flat	Estimated tutoring fees: http://www.care.com/	-
Tutoring, homework help, or other educational needs	\$10.00	\$11.25	flat	Estimated tutoring fees: http://www.care.com/	-
Research assistance with business related research	\$12.00	\$11.77	flat	Estimated tutoring fees: http://www.care.com/	Premium price added due to reports generated and question complexity
Computer and Internet access	\$18.00	\$17.37	flat	Estimates from: https://www.att.com/ http://www.xfinity.com/ http://www.centurylink.com/ https://www.charter.com	-
Use of language learning software	\$90.00	\$86.25	flat	Estimates from: www.rosettastone.com Reference: http://www.pcmag.com/article2.asp	Considered new and used software
Use of Microsoft office programs	\$60.00	\$53.35	flat	Estimates from: http://www.amazon.com/ http://www.microsoftstore.com/	Considers new and used and older Office products. Discounted to account for program's use by library patrons
Playing computer games	\$4.00	\$5.16	flat	Estimates from: http://www.amazon.com/ http://store.steampowered.com/	Considers free games accessed via Internet, as well as new and free digital downloads

Library Service	Market Value	Hybrid Value	Unit	Market value source	Notes
Accessing research databases	\$50.00	\$46.53	per visit	Estimates and price list from: http://www.oxfordjournals.org/ http://www.jstor.org/ http://www.lexisnexis.com/ http://www.thomsonreuters.com/	-
Accessing business databases	\$50.00	\$43.62	per visit	Estimates and price list from: http://www.oxfordjournals.org/ http://www.jstor.org/ http://www.hoovers.com http://www.referenceusa.com/	-
Accessing genealogy databases	\$20.00	\$19.63	per visit	Cost of U.S. discovery monthly membership at http://ancestry.com	-
Accessing legal resources	\$30.00	\$29.10	per visit	Estimates and price list from: http://www.amazon.com http://barnesandnoble.com http://www.oxfordjournals.org/ http://www.jstor.org/ http://www.hoovers.com http://www.referenceusa.com/	-
Microsoft Office training	\$160.00	\$152.37	per visit	Estimates from: http://www.businesscomputerskills.com/ http://www.careerstep.com/microsoft-office-training http://www.newhorizons.com/	Estimates adjusted for one class or program
ESL or other language classes	\$50.00	\$50.00	per visit	Tennessee Foreign Language Institute - http://tfli.org/	Discounts applied when adjusting for free English resources available in the region, no change in market value
Computer usage training	\$35.00	\$33.30	per visit	Estimates from: http://www.businesscomputerskills.com http://www.careerstep.com/microsoft-office-training http://www.newhorizons.com/	Estimates adjusted for one class or program
Job search labs	\$5.00	\$4.73	per visit	Value based on computer usage and consultation	-
Story times	\$5.00	\$6.12	per visit	Estimates based on value added of 30-45 minutes of entertainment	-
After school programs for youth	\$20.00	\$20.81	per visit	Estimated cost of space and services	-
Puppet shows	\$6.00	\$6.31	per visit	Estimated value added and ticket estimates for troupes outside the region	-

Library Service	Market Value	Hybrid Value	Unit	Market value source	Notes
Concerts	\$18.00	\$18.74	per visit	Estimated ticket value: http://endnashville.com/ http://www.exitin.com/ http://thebasementnashville.com/ http://ryman.com/ http://www.marathonmusicworks.com/ https://www.nashvillesymphony.org/ http://stationinn.com/ http://thecanneryballroom.com/	-
Lectures	\$10.00	\$11.12	per visit	Estimated value of celebrity speaker and venue costs	Majority of lecture events are free
Other events	\$10.00	\$11.13	per item	Estimated value of events otherwise not classified	-