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Jan Stejskal, Petr Hájek, Tomáš Řehák (2019). The economic value of library services for children: The case of the Czech public libraries. *Library & Information Science Research*. DOI: 10.1016/j.lisr.2019.100963

This accepted version is available from URI <https://hdl.handle.net/10195/75202>

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Economic value of library services for children – The case of Czech public libraries

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Abstract:

Public support of library services must be targeted towards children because these services play a key role in their development. However, no prior research has investigated the value of public library services for children. Specifically, earlier studies evaluated the value of public libraries as a whole, without considering library services for different stakeholders. The fact that children are not autonomous economic agents is another problem to address. These barriers can be overcome by using the contingent valuation method with parents/caregivers as the subjects queried and children used as the objects in this study. Thus, the economic value of library services for children can be obtained to support managerial decisions on services specifically designed for children. More precisely, this study is unique in that it develops a contingent valuation methodology for estimating the value of children's library services based on adults' willingness to allocate a proportion of municipal budgets. Both users and non-users were surveyed to verify the proposed methodology empirically. The results show that the perceived effectiveness (ratio between perceived benefits and costs) of children's library services is 11.2 (11.2 units of benefits for each unit invested) in Czech public libraries compared with 4.3 for a library as a whole. This finding confirms the essential role of children's library services, implying that public libraries should offer a broader selection of children's books and other services. The study also shows that the value of children's library services depends on the age, education and economic structure of the adults queried. In addition, their satisfaction with library services is another important determinant, indicating that public libraries can influence the perceived benefits of children's library services.

Key words: public library, WTP, contingent valuation, children

1. Introduction

The importance of public services for both society and individual citizens has been accentuated in developed countries globally for decades (Hartley, 2005). The original definitions and characteristics of public services have always been based on consumers' needs and the socioeconomic situation of the country. The consumer is the first subject when deciding individual preferences for the scope and content of public services. Their changes in behaviour, needs and preferences can be described as a revolutionary shift. A second group of decision-

makers on public choice are politicians. This political decision-making is regularly repeated and often based on the original assumptions about the content of the service; the extent of the public choice decision is thus determined by public budgets (Anand, 2004). The third group of subjects are public libraries, whose future existence is under discussion (Worstell, 2014). Libraries respond to this revolutionary shift by styling themselves in the roles of "invisible intermediary", "memory institution", "learning centre" and "community resource" (Brophy, 2008) to substantiate their existence. Indeed, there has been extensive discussion of their basic mission, expected functions and benefits for users and society (Buckland, 2014; Goulding, 2016).

Many researchers (e.g. Benstead, Spacey & Goulding, 2004; Casey & Savastinuk, 2006; Goulding, 2016; Rubin, 2017) have shown that the content of public services needs to be addressed and analysed. Typical examples of such services are the cultural and information services provided by public libraries. The reasoning relates mainly to the characteristics and scope of the provided services, in line with the roles libraries perform for society. The basic service provided by libraries is borrowing (e.g. borrowing books, magazines and other media). However, a wide range of studies have discussed the purpose and effectiveness of providing paper books compared with e-books (Ashcroft, 2011; Rao, Kumar & Tripathi, 2018). Further, the information provision and processing services provided by libraries are inherently provided through Information and Communication Technologies (ICT). Reformulation of the way in which such services are provided has therefore naturally taken place following the development of ICT, including database access and Internet access services (Andrews, 2017).

A specific service discussed over the past decade has been the community services offered, or the library as a meeting place (Audunson, 2005). From a wider perspective, libraries have always been a place in which to stay for some time to use both their services, as discussed above, and perform one's own activities such as learning, reading, debating and sitting (Aabø & Audunson, 2012). The library is a suitable space for these types of activities, as it usually is open for long hours and has sufficient resources (Aabø, Audunson & Vårheim, 2010).

2. Problem statement

The reformulation of library services often occurs spontaneously. For example, digital services typically respond to natural development and technological shifts; the library as a community centre (i.e. a place to spend time on one's own activities) is also perceived by consumers commonly. However, the management of the library (and often its donors) must also aim to change services from other points of view such as public interest and economic sustainability (Kerslake & Kinnell, 1998). For the first, it is necessary to define the main functions of the libraries, while for the latter donors (often municipalities) have limited budgets each year and must know what they are financing (Stejskal & Hájek, 2015a). The example of the UK shows that not only theoretical considerations must be considered. The UK has undergone significant budget cuts and a reduction in library services based on an effectiveness analysis. These public interventions have led non-profit government organizations and communities funded by external or private sources to supply replacement services.

For these reasons, it is necessary to address both the current expectations and the needs of citizens, to define the importance of library services, and to evaluate library services economically. By combining these views, it would be possible to define an optimal portfolio of services and a sustainable way of financing them (Stejskal & Hájek, 2015b). However, the characteristics of the majority of the social groups of consumers (i.e. users) of library services

need to be emphasized. One of the most prominent groups is children and young people. For example, Morris, Sumsion and Hawkins (2002) reported that around one-quarter of readers¹ in the UK are children. A similar percentage can be observed in Czech libraries (Vavra & Matyasova, 2018). Children's librarians have long recognized the influence of libraries on the development of children and adolescents, thus justifying the need for adequate public funding to support the programmes and services targeted at children, adolescents and families (Joo & Cahill, 2017).

The crucial importance for deciding on the allocation of public funds to libraries, but also within libraries, is the perception of the importance (relevance) of children's library services for society (the general population). One of the approaches to identify the economic benefits of children's library services is to examine its perceived value for adults. Studies in the area of library services that address the perception of the benefits as well as the difference in the perception of the usefulness of children's library services are scarce. This scarcity is because many scholars have failed to solve the basic methodological problem: children are not perceived as a separate economic entity capable of evaluating the benefits of consumed services. The current research uses parents and caregivers to help children evaluate library services because children are not autonomous economic agents, as discussed by Hammitt & Haninger (2010). In fact, parents/caregivers are also important stakeholders in public library services for children and it is therefore legitimate to ask their views (Feinberg, Kuchner & Feldman, 1998). This study determines the importance of library services for children with the help of the valuation of adults' stated preferences. Using this approach to evaluate the value of children's library services is a new methodological approach for valuing library services.

3. Literature review

The economic value of the services provided by libraries is well researched. A detailed overview of these studies was provided by Fujiwara, Lawton and Mourato (2015). Various evaluation approaches and methods have been used. In particular, contingent valuation methods (willingness to accept compensation - WTA and willingness to pay - WTP) (Missingham, 2005), various types of market valuations and use of market substitutes, and other methods are used most frequently in practice of the public services valuation (see Stejskal & Hájek, 2015a). Primary data are gathered by surveying respondents, mostly readers.

The vast majority of economic studies work with the reader as a general concept. Many authors (e.g. Imholz & Arns, 2007; Merga & Roni, 2017; Sumsion, Hawkins & Morris, 2002) do not hide the fact that children are among the recipients of the service in their economic analyses. All above mentioned scholars value the benefit of the service consumed by both adults and children. However, it can be assumed that the value of children's library services is not the same as the value that a library delivers to adults. No study has thus far examined the value of services consumed by children and young people. The use of WTP (Aabø, 2005) is based on the ability of the subject to evaluate the perceived benefit of service consumption. This is based on experience, the ability to compare value with price, understanding the value of work and time, and many other factors. For children and young people, the use of these research approaches is greatly limited and therefore no research studies can be found in this area.

A considerable amount of the literature has been published on the role of library services for children. These include, for example, research in the following areas:

¹ A reader is a child who borrows at least one book a year in a public library.

- The library as a place for children and young people (Chandrasekar & Sivathaasan, 2016) and the use of library services by disabled readers, including the adaptation of the library and its services to meet their specific needs (Bushman, 2018);
- The relevance of libraries in the field of education and their involvement in the preparation of high-quality educational programmes for children and young people (Overbey, Dotson & LaBadie, 2018 illustrates two successful Ohio urban STEM programs, produced as collaborations between public libraries and higher education institutions);
- Support to increase children's reading motivation with the help of new technologies or media such as the reality story library (Goulding, Shuker, & Dickie, 2017; ChanLin, 2018), new apps to find books using smartwatches (Wang, Chen, & Wu, 2017), mobile libraries (Bamkin, Maynard, & Goulding, 2016), mobile technologies (Bowler, Julien, & Haddon, 2018) and augmented reality tools (Meredith, 2015);
- The perception of libraries and services by children and young people (Kanazawa, 2018 illustrates the importance of libraries and their services for children and young people in Japan);
- The changes in the structure of library services that have expanded children's digital literacy (Tang, Wu, & Pan, 2016). For example, Robertson and McMenemy (2018) discussed changes in UK library services for children in 2010 and 2016, finding that the hollowing out of public services for children had occurred. This study could also be a stimulus to discuss the status and role of libraries in the modern era.

However, none of these studies has analysed the economic parameters of the proposed changes or evaluated the benefit for children readers, mainly because of the inability to express the benefit for children.

4. Methodology

The research consists of two parts, the first concerns the total library value and the second deals with the value of children's reading for society. This first part was devoted to the determinants of *total library value* obtained using two approaches: tax and budget assignment. Under this application of contingent valuation in empirical research, researchers ask for consumers' WTP to consume certain public services. As these services are perceived by consumers as part of their social well-being, they base their assignments (allocation) on their historical experiences and social conventions. Therefore, it is difficult for them to think about valuing something that has so far been almost free. Another problematic point is the non-objectivity in the valuation; the consumer suffers from information asymmetry and often reflects his/her own social status, philanthropic reluctance or social laziness.

The research used a survey to determine the respondents' answers. Computer-assisted web interviewing was conducted by the sociological agency, Sociores, to collect data for the evaluation of public library services for children. The data were collected in November 2016. As presented in Table 1, quota sampling was used to obtain representative results. Respondents included the general population (both library users and non-users).

Table 1 about here

Respondents were asked to evaluate the value of public libraries in general. The questionnaire asked participants to agree or disagree with two statements. Statement 1 was as follows: "Public

libraries have value only for library users”. Statement 2 was given as follows: “Public libraries have value not only for library users but for society as a whole”. The second question was used to control for the verification of the basic assumption that libraries are perceived as institutions working in the public interest.

Due to the high level of abstraction and low ability of consumers to determine the real value of the services, scenarios and questions were provided to make it easier for consumers to distribute "extraneous" money (customer's taxes from his/her income or money directly from the public budget). This procedure eliminated vagueness and allowed consumers to assign the value of the service according to how they feel. The questions were as follows:

- Q1: Please imagine the following situation: you can decide how to deal with the proportion of the taxes you pay. In addition, imagine that the activity of the Municipal Library in Prague depends directly on the amount of taxes that the city's inhabitants will support each year. What is the highest amount of your taxes you would be willing to use to support this library?
- Q2: Please imagine the following situation: you are a member of Prague² city council and decide about the subsidy for the Municipal Library of Prague for the next fiscal year. You can decide to increase or decrease the subsidy. Currently, 300 CZK/inhabitant/year is the total cost of the Municipal Library of Prague. For example, if you doubled the subsidy (600 CZK), the library could buy twice as many new books, arrange twice as many events, open for twice as many hours, and so on. How much would you allocate to the library as a council member?

As part of these questions, anchors (amounts in CZK) were used to assist respondents in answering the questions related to library evaluation. Anchors were represented by actual costs calculated based on libraries' annual reports. The purpose of the financial anchor is to provide a realistic awareness of the cost ratios to help respondents use more realistic values. From the primary data, it is possible to determine that when the reader provided a higher amount than the financial anchor, he/she perceived the library's services as very important.

Based on the previous results, questions used earlier in this research were modified because researchers wanted to find out how readers perceived the importance of children's library services through the allocated amount. It can be assumed that a higher willingness to allocate money to library services specially designed for children means the greater the importance of children's library services. The questions were modified as follows:

- Q3: Public libraries provide services not only to adults, but also to children (readers and visitors). Do you think it is valuable for society to support publicly funded services specifically designed for children? The answers are: certainly, yes a little, not really, certainly not and do not know.
- Q4: The amount of CZK 300 represents the total annual library cost per inhabitant. Of this amount, approximately CZK 50 is used for library services for children. Please imagine the following situation: you are the member of the Prague³ city council and decide about the subsidy for children's services for the next year for the Municipal

² Zlin's inhabitants had the text of the question modified to their context.

³ Zlin's inhabitants had the text of the question modified to their context.

Library of Prague. The annual cost of children's services per child was approximately CZK 50 in the last year. How much would you give to the library for children's library services?

The determinants of library value obtained from questions Q1–Q4 were based on previous research by the authors and the review of the literature mentioned above. For all four approaches, generalized linear models were developed using the restricted maximum likelihood method for the model estimation. To avoid biased estimates, the data were tested for multicollinearity and heteroscedasticity.

5. Results

Table 2 shows the basic descriptive statistics of respondents. Women accounted for 51.3% of the sample and the average age of respondents was 46.2. The average reading activity of respondents was 14.9 books in the last 12 months. About half of respondents visited a public library at least once in the last year, whereas about 7% never used its services. About 76% of respondents were registered users at the time of the survey. Most respondents had upper secondary or university education and were economically active. Net household income was mostly in the interval of 15,000–45,000 CZK. The average number of household members was 2.00 adults and 0.49 children. Registered users were further asked to assess their satisfaction level (on a scale of 1–5) with the services provided by the corresponding public library. On average, satisfaction can be considered as high (with a mean value of 4.05).

Table 2 about here

When asked to evaluate the value of public libraries in general, control questions (statements 1 and 2) were used. In total, 65 and 446 respondents agreed with statement 1 and statement 2, respectively. Only nine respondents disagreed with both statements. This result shows that readers generally perceive the existence of public libraries as important.

Based on the positive results of statements 1 and 2 and in line with the proposed research methodology, questions Q1–Q4 were asked to evaluate library services using the contingent valuation method. Questions Q1 and Q2 were used to estimate the perceived value of public libraries as a whole, while questions Q3 and Q4 focused specifically on the economic value of library services for children. More precisely, question Q3 was asked to determine whether those services are valuable for society, and the economic value was obtained using question Q4. The results showed substantial differences in WTP values when using different evaluation (payment) methods (tax assignment / budget assignment). The results of question Q3 suggested that respondents expressed (public) interest in the existence of library services for children (with a mean value of 4.67). Notably, this value for budget assignment amounts to 43.6% of the total perceived library value (obtained using the budget assignment method).

Table 3 about here

Table 4 shows the Pearson correlation coefficients between the results obtained for the different library evaluation methods. A strong correlation can be observed between the two methods based on municipal budget assignment, whereas no significant correlations were found for tax assignment and the general public funding of children's libraries, respectively.

Table 4 about here

The results of Table 5 show that respondents perceived children's library services as very important (question Q3). Respondents evaluated the importance on a five-point scale. Most of the determinants (despite their varying degrees) reached almost 4.5 points, which is of great importance. The quality of the results confirms the results for "the value for society": if the respondent does not understand the importance of children's library services for society, he/she also attaches fewer points and is less willing to allocate money from the public budget.

Looking at question Q4, namely whether respondents would increase the financial allocation for services specifically designed for children, the results showed a strong willingness to increase the subsidy (the question stated that 50 CZK is the annual cost per child per year). However, the results in Table 5 (determined by various determinants) are significantly higher than 50 CZK.

The data show some interesting results. The differences in the perception of the importance of library services for children and the accessibility of these services are determined by region (Prague/Zlin region), the value of the library for society, the level of education, the level of income and the level of satisfaction. In particular, services for children are valued by the lowest-income groups of the population, retired people and people with only secondary education. Interestingly, students perceive the importance of services for children and express it with a double allocation (121 CZK); however, at the same time, their answers suggest that other services are more important to them. This is probably based on their experience, as most young people now search for information on the Internet, by reading e-books and so on.

Table 5 about here

Overall, four runs of approaches were performed to examine the determinants of library value. First, the researchers focused on the determinants of total library value obtained using two methods, namely tax and budget assignment. Second, the library value assigned specifically to children's library services was determined. Again, two contingent valuation methods were used to obtain the value: public funding and budget assignment. The variance inflation factors were lower than 2.5 for all variables, indicating the absence of multicollinearity. The presence of heteroscedasticity was rejected ($p = 0.05$) using the Levene test. Furthermore, the Durbin-Watson test indicated no significant linear autocorrelation, while the Shapiro-Wilk test found no deviation in the unstandardized residuals from the normal distribution. Table 6 show the results of the generalized linear models for total library value.

Table 6 about here

Age and region were significant determinants in both models. The tax assignment value was further positively affected by the frequency of library visits, income level and satisfaction level. By contrast, the value of budget assignment was promoted by reading activity and the economic situation of readers. The other investigated determinants did not show significant results in either of the allocation methods.

The research results of this study showed that readers can appreciate the benefits of consumed services when applying the correct assignment method and thus expressing the importance of that service for their own well-being. Therefore, the same method was used to determine the importance of children's library services.

Question Q3 was answered positively by 93% of respondents (certainly or yes a little). This result unambiguously illustrates the general social awareness of the importance of children's library services. At the same time, it also clearly illustrates the need for library services specifically designed for children and young people. Table 7 shows the results of examining the determinants of the importance of children's library services and willingness to allocate money to services specifically for children.

Table 7 about here

Satisfaction with the quality of children's services is an important determinant of both models, with the value of child reading more important than that of total library value. This unambiguously confirms the importance of children's library services for the target group of this research.

6. Discussion

6.1. Support for previous research

The results of previous research (Hajek & Stejskal, 2015) clearly show that the use of tax assignment or tax contributions represents a suitable method for determining public service value. Thanks to the elicitation scenarios and use of the anchor, respondents can tell the real costs of the library or the cost per reader or child per year. Additional arguments justifying the use of budget assignment in cultural institutions are given by Koford (2010).

Considering the quality of the regression models, the coefficient of determination R^2 was highest for the budget assignment models (0.739 and 0.706), whereas it was only 0.062 for the tax assignment model. Hence, the main determinants of budget assignment and importance of children's library services were found, while less than 7% of the variance could be explained by the willingness to contribute from taxes. These results are in agreement with previous research (Aabo, 2005b; Hajek & Stejskal, 2015). Regarding the determinants of the willingness to contribute from taxes, the results corroborate those obtained for the users of the Municipal Library of Prague (Hajek & Stejskal, 2015), with age, the frequency of visits and income level shown to be significant determinants. In addition, and in agreement with earlier research, education (Aabo, 2005b; Lee, Rodriguez, & Sar 2012) and sex (Lee & Lee 2010) were not significant determinants, while age was a better predictor of library value than economic activity (Lee, Rodriguez, & Sar 2012). Thus, on the one hand, the present study provides additional empirical support to the findings of Hajek & Stejskal (2015) and Lee, Rodriguez, & Sar (2012). On the other hand, the results presented here are validated by those obtained previously. This provides support to the results of the other three models used in this study.

The results point to the fact that WTP of Czech people for library services differs geographically. Inhabitants from Prague are willing to assign higher amounts than those from Zlin city, whereas the inhabitants of Zlin prefer to provide more money from the public budget. This situation can be justified by differences in wages and therefore the amount of paid tax (the average wage in the surveyed year is 35,187 CZK in Prague, while in Zlin it is only 24,342 CZK). Importantly, both groups of consumers in the different regions perceive library services as important. The results (despite their differences in assignment) clearly show that the readers in Prague and Zlin perceive libraries and their services as important.

The total value of the library, expressed by tax or budget allocations, is increasing with age. This finding confirms that older people perceive the importance of library services more than do the younger generation. A respondent's sex does not play a role in these results. However, income level is an important determinant for the tax assignment method, while the economic situation is for the budget assignment method (retired and economically active people would assign much more money). These results are in line with previous ones (for example in Aabo, 2005b; Hajek & Stejskal, 2015).

Tax assignment is significantly affected by visit frequency, while budget assignment is influenced by reader activity. This result again underlines that if the consumer uses the offered services, he/she is willing to pay for them from his/her own pocket. WTP from the participant's own paid taxes is perceived as proof of the service significance to the consumer. This is also confirmed by the finding that satisfaction is significant in the case of the tax assignment method.

The perception of the importance of children's library services is associated with the value for society, showing a so-called warm glow giving effect associated with the emotional reward for helping someone else. However, this effect may slightly weaken the verbal capability of the results, because within the warm glow effect context, people feel "impurely altruistic," but both maintain both altruistic and egoistic motivations for giving. For future research, it is thus necessary to find out how many "impurely" and "purely" altruistic people were in the target group.

Further, the results confirm that older people and the lowest-income groups of the population are willing to provide a higher budget assignment for children's services because of the higher maturity of respondents and their perception of children and young people as a decisive generation for the future. The same result was achieved for the number of adults in the household. This is a logical confirmation of the previous result in this study. The poorest groups of the population perceive the library as a source of money saving (e.g. due to compulsory reading of children at school).

For the model of municipal budget assignment for general library services, slightly different results than those for the tax assignment model were obtained. Interestingly, people from the Zlin region were more willing to contribute from the municipal budget than those from the Prague region. This slight difference can be justified by the smaller number of available libraries in less populated regions, which increases the scarcity of library services. Reading activity was also more important than the frequency of visits in the municipal budget assignment model. Economic situation was another significant determinant, indicating the different budget preferences of each economic category. Although satisfaction level was another important determinant, it was not statistically significant, suggesting that respondents are willing to support public libraries from municipal budgets irrespective of their satisfaction level.

Regarding the results for municipal budget assignment for children's library services, age and economic situation were the most important determinants, as for general library services. However, satisfaction level was more important, while the effect of region and reading activity was reduced in the case of children's library services. This suggests that higher contributions to children's library services from municipal budgets were assigned by non-users. Finally, in the model for the public support of children's library services, registered readers and satisfied users assigned significantly higher importance. In addition, public support was higher for respondents agreeing with the importance of public libraries for society as a whole, whereas

single people assigned significantly lower support. In other words, economic situation and age were not significant in this case, suggesting that the public support of children's library services may not decline significantly with changes in region, wealth or demographic structure.

Attention was also focused on exploring the absolute (total) values that people would assign to a library using different methods. This value shows the importance of the existence of the library. The results illustrate the following:

- The inhabitants of Prague and Zlin are willing to assign taxes more than seven and six times the actual annual costs, respectively with the help of a public budget allocation,
- Respondents who answered in the previous question that the library provided no value for society were willing to contribute to the operation of the library on average 489 and 1379 CZK, respectively,
- With the growth of educational attainment, the significance of the library for individuals is growing and more satisfied individuals perceive the library as more important,
- Non-readers (those who do not use library services) perceive the library as more important than readers (library services consumers), as the perception of the importance of library services is ingrained. Readers see the library's value to be connected to the quality of the services provided.

Looking at the average ratios of responses to the willingness to assign amounts to the libraries and anchors, the total library value ratio is 4.3 (1290/300) and the value assigned to children is 11.2 (562/50). The important result is that the value of library services for children is 2.6 times higher than that for total library value. This result can be used in ROI or CBA calculations, when there is no need to calculate the specific value of the library services provided to children. This methodological conclusion will significantly increase the accuracy of the calculations of the total economic value of libraries.

6.2 Limitations

This study has certain limitations including significance and the high level of subjectivity when respondents answered questions. However, it was necessary to avoid these risks by conducting pilot testing and surveying questions and scenarios so that respondents were fully able to understand and respond. In this study, the traditional approach of positioning children as objects rather than the subjects of investigation was adopted (Christensen & James, 2008) due to the methodological and ethical issues raised when considering children as respondents (for details, see Woodhead & Faulkner, 2008).

An additional risk is also the warm glow giving effect, which is always present in empirical surveys of topics perceived as beneficial. Here, the possibility of improvement in further research as outlined above should be noted (e. g. new questions need to be tested in the context of a warm glow effect).

7. Conclusion

The importance of services primarily provided to children and young people was illustrated in this study. The robust results verified the importance of these services for Czech citizens, which is usually felt, but not thus far empirically validated. In the future, it would be possible to follow the presented methodology and analyse the trend and trend development of the value of both

the whole library and individual services for children. It may be difficult to use the results in another country. However, the methodological approach presented can be adequately applied anywhere.

The results show one methodologically important fact: all studies that deal with the value of library services (usually with the help of evaluation scenarios and contingent valuation) are failing if they do not distinguish children readers from the general readers. The results suggest that the perceived value (i.e. WTP) of child-oriented library services is many times larger. The proper methodological examination of the perceived value of services for children would therefore significantly increase the resulting value and thus return-on-investment or cost-benefit-analysis. Therefore, further research should investigate a methodology for detecting the perceived value of services consumed by specific groups such as children, as no research has been published yet that has used this methodological line.

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Table 1. Survey information.

Survey type	quantitative
Sample size	<i>N</i> =520 (Prague - 250, Zlin region - 270)
Sample selection	Quota sampling from the online panel of the Czech National Panel, age category and sex in the region used as quotas (based on the data from the Czech Statistical Office)
Data collection method	online survey (computer-assisted web interview)
Average time of filling in the questionnaire	11 minutes and 51 seconds
Pilot survey	March 2016
Data collection	November 2016

Table 2. Basic descriptive statistics of the respondents.

Variable	Frequency / Mean±St.Dev.
Region	Prague: 250, Zlin: 270
Sex	male: 253, female: 267
Age	46.2±30.0
Reading activity	14.9±28.0
Registered reader	no: 395, yes: 125
Frequency of library visits	never: 36, earlier: 146, in last 5 years: 70, in last year: 268
Education	primary: 19, lower secondary: 63, upper secondary: 233, university: 205
Economic situation	retired: 126, economically active: 307, student: 43, other/unemployed: 44
Net income of household in CZK	<15,000: 63, 15,000-30,000: 214, 30,000-45,000: 140, 45,000-60,000: 70, 60,000-75,000: 12, >75,000: 21
Number of adults in household	2.00±0.90
Number of children in household	0.49±0.95
Satisfaction level (1-5)	4.05±0.67
Value for society	agree with statement 1: 65, agree with statement 2: 446, disagree with both statements: 9

Table 3. Results of the evaluation (Mean±St.Dev.).

Question	Evaluation method	Mean±St.Dev.
<i>Q1</i>	Tax assignment [CZK]	1520±7049
<i>Q2</i>	Budget assignment [CZK] (300 CZK)	1290±9585
<i>Q3</i>	Public funding of children libraries (scale 1-5 from certainly no to certainly yes)	4.67±0.74
<i>Q4</i>	Budget assignment [CZK] (50 CZK, children)	562±4915

Table 4. Correlation matrix for the used library evaluation methods.

	Tax assign.	Budget assign. (300 CZK)	Public funding
Tax assignment			
Budget assignment (300 CZK)	0.00		
Public funding of children libraries	0.01	0.02	
Budget assignment (50 CZK, children)	0.02	0.94*	0.00

* statistically significant correlations at $p = 0.05$ using Pearson's correlation coefficients

Table 5. Categorical variables and library value.

Variable	Value ⁺	Valuation of child-readership	
		Importance of child-readership	Assigned money from budget
Region	Prague	4.63	459
	Zlin	4.97	656
Sex	Male	4.59	577
	Female	4.73*	547
Value for society	0	3.89	123
	1	4.22	118
	2	4.74*	635
Education level	1	4.47	115
	2	4.73*	1424
	3	4.59	302
	4	4.76*	633
Income level	1	4.65	1121*
	2	4.72	269
	3	4.66	1053
	4	4.61	187
	5	4.25	95
Registered reader	no	4.62	682
	yes	4.80*	181
Economic situation	pensioner	4.78*	747
	employee	4.61	540
	student	4.56	121
	other	4.82*	619

* significantly higher at $p = 0.05$ using the Student's paired t -test

Importance of children's library services – 5.0 points denotes the maximum importance

⁺ the higher the number, the better the value

Table 6. Determinants of total library value.

	Tax assignment		Budget assignment	
	<i>F</i> -value	<i>p</i> -value	<i>F</i> -value	<i>p</i> -value
Intercept	0.432	0.511	22.345	0.000***
Region	3.198	0.074*	2.898	0.089*
Sex	0.645	0.422	0.004	0.950
Age	3.393	0.067*	1394.620	0.000***
Reading activity	0.019	0.892	5.183	0.023**
Frequency of library visits	5.931	0.015**	0.000	0.986
Value for society	0.385	0.535	0.005	0.942
Education level	0.097	0.756	2.023	0.156
Income level	4.054	0.045**	2.085	0.149
Number of adults in family	0.607	0.436	0.442	0.506
Number of children in family	1.404	0.237	0.000	1.000
Satisfaction level	4.329	0.038**	1.915	0.167
Registered reader	0.728	0.394	0.428	0.513
Economic situation	1.402	0.241	53.763	0.000***
<i>R</i>	0.249		0.859	
<i>R</i> ²	0.062		0.739	
Adj. <i>R</i> ²	0.012		0.731	

* significant at $p = 0.10$, ** at $p = 0.05$, *** at $p = 0.01$

Table 7. Determinants of the value of children's library services.

	Importance of children's library services		Budget assignment for children' library services	
	<i>F</i> -value	<i>p</i> -value	<i>F</i> -value	<i>p</i> -value
Intercept	32.928	0.000***	13.244	0.000***
Region	0.042	0.838	0.437	0.509
Sex	0.053	0.818	0.459	0.498
Age	0.653	0.420	1187.489	0.000***
Reading activity	0.000	1.000	0.507	0.477
Frequency of library visits	1.371	0.242	0.007	0.935
Value for society	21.427	0.000***	0.244	0.621
Education level	0.046	0.830	2.915	0.088*
Income level	0.852	0.356	0.348	0.556
Number of adults in family	3.764	0.053*	0.051	0.822
Number of children in family	0.560	0.455	0.000	1.000
Satisfaction level	222.919	0.000***	2.730	0.099*
Registered reader	5.904	0.015**	0.462	0.497
Economic situation	1.641	0.179	50.226	0.000***
<i>R</i>	0.631		0.840	
<i>R</i> ²	0.398		0.706	
Adj. <i>R</i> ²	0.380		0.697	

* significant at $p = 0.10$, ** at $p = 0.05$, *** at $p = 0.01$