

# DETERMINATION OF THE VALUE OF PUBLIC LIBRARY SERVICES IN A GLOBALIZED SOCIETY

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**Abstract.** Globalization is not just an economic and political process but also a cultural one. Institutions that are undoubtedly an integral part of cultural events include public libraries. Libraries with their functions contribute to social equality and justice, enable every citizen to gain access regardless of age, nationality or social status. It serves as an important presenter of values for the development of a culturally educated individual. The value of libraries can be difficult to express and its calculation can not be based on standard costs, as is the case in a normal production enterprise, requires a special process. This difficult process is used to estimate prices based on individual library users' surveys. The benefits of public services provided by public libraries are attributed to the individual preferences and values of public library users. This article describes ways to determine the value of basic library services - book lending. The data for the calculations are based on the research of the Municipal Library in Prague, which takes place from 2012 until present. This research provides the largest survey of public libraries in the Czech Republic that helps public libraries to orient their activities and to adapt their decision-making activities in the field of finance. The article also describes changes to libraries in a globalized society.

**Keywords:** public library, benefit, measurement

**JEL Classification:** D 12, H 31, H 41, I 25

## 1. Introduction

Public library services are public services that are provided for the purpose of achieving benefits for society. In today's globalized society, they are so important in culture, education and awareness. They are classified as mixed collective services, as they meet the signs of divisibility, exclusivity from consumption and rivalry in the consumption of the service (Kraemer & King, 1986). Public library services belong to the culture sector, which as such bring significant benefits and benefits to the company, which are described inter alia by IFLA / UNESCO (National Library of Czech Republic, 2012). In practice, each library defines the range of services it provides. Therefore, it was necessary to define the basic taxonomy of all available public services that they can provide to public libraries for their customers. The following services have been defined for the purpose of solving the research task financed by the Ministry of Culture of the Czech Republic: lending, copying and printing, digital services on-line, online digital services, information and research, cultural and educational events,

technical and other services, community life, stay in the library. Due to the biggest use of the library service for absentee loans (80% of the total), this article will continue to deal with this type of library services (Stejskal et al., 2016).

## **2. Methods of measuring the benefits of library services**

Public library services are among those that can be difficult to analyze in terms of their effectiveness. The reason is a problematic definition of the measurability of these services and the problematic determination of the value of these services as output of public production (Vakkari & Serola, 2012). All available studies on the effectiveness of public libraries (Holt & Elliott, 2003; Aabø, 2005; Vakkari et al., 2014 and others) had to cope with these two issues. None of the quoted definitions, however, detail the measurement of the service itself. Foreign studies are satisfied with the easily identifiable number of borrowings or the number of served readers (Truett, 1990, Hennen, 2002), which greatly reduces the intelligence of analyzes. All studies on the effectiveness of library services for their calculations are based on cost and benefit values. Cost solutions are considerably easier in terms of measurability, these items are clearly identifiable and traceable from the bookkeeping of individual libraries. The problem arises only in the case of the allocation of costs to individual groups and the assignment of values for the particular library service provided. Benefit issues are very challenging, calculations of their values are a complex process. The value of benefits is determined, inter alia, by the concept of contingent valuation and by the method of determining the consumer surplus (Kim, 2011).

### **2.1 Contingent valuation**

The principle of CV consists in assigning the relevant values to individual goods and services by the consumer, because the consumer himself can best define the perceived value of the good or service. In the case of public services where there is no market price for a service, it is an expression of individual consumer preferences, for example through willingness to pay for public service consumption. The second option is to determine the amount of money consumers would be willing to accept as a deterioration in the quality of life if the service was not provided to them and would compensate for them (Lee & Chung, 2012). This method should help answer the question whether the service is to be a public service, ie to be financed from public sources, and to what extent public resources should be represented to finance the cost of producing this service if the Pareto Efficiency conditions are to be met (Hanemann, 1991). For financial evaluation of non-market benefits resulting from the activities of public libraries, it is appropriate to use this method (Pichova, 2016). Determining the subjective value of consumed goods is possible only by questionnaire survey or controlled interview. Obtaining these data is technically very demanding because individual consumers have to understand the questions posed enough and must be able to express the value of their consumption in relation to their retirement, the value of their time or the comparison with the price of other goods (Knetsch & Sinden, 1984).

#### **2.1.1 Willingness to pay**

The willingness to pay approach (WTP) addresses the value of services according to individual preferences and determines the value the consumer is willing to spend on obtaining

the service. Elicitation techniques for WTP issues have undergone significant developments, but there are still no unified practices that would be mainstreamed. Elicitation always depends on the individual's individual preference, on the various current factors, and on the question of the payment mechanism offered. So the survey maker can significantly or negatively affect WTP results (Mitchell & Carson, 2013).

### 2.1.2 Willingness to accept compensation

The willingness to accept compensation (WTA) approach expresses the value of the service on the basis of the willingness to accept the denial of service consumption. It is the minimum amount of money the consumer is willing to accept for denial of a particular service or for what value he / she is willing to accept with a certain negative phenomenon (pollution, misuse).

Studies have shown significant differences between WTA and WTP approaches. The value of WTP is less than the willingness to accept WTA compensation. In practice, the WTP method is most commonly used. However, a WTA and WTP value interval, which has not been interpreted so far in the studies, could be considered as a suitable estimate.

## 2.2 Consumer surplus

Methods of economic evaluation of non-market goods and benefits based on consumer surplus are, for example: travel costs method and hedonic price method (Marella & Raga, 2014). The amount of time, travel and other possible costs is a value for the consumer that can be used to assess other possible alternatives to the use of these resources. Consumer surplus (Stejskal et al., 2013) is expressed in terms of the value that the client gets beyond what they have to provide library services to pay a surplus producer. Social welfare, which the library brings, measured by consumer surplus, is based on the results of the questionnaire survey.

Other methods replicate practices that are commonly used in the private sector, such as return on investment (Kaufman & Watsein, 2008), as mentioned above. Other methods used to determine the effectiveness of library services include, for example, methods for measuring the overall economic value, measuring the value of the knowledge economy, a modeling model, and others.

## 3. Results of applied methods of valuation of public services

From a methodological point of view, two basic approaches are used to determine the benefits of public libraries' services in world practice, which have proven to be valuable in examining the value of public library services. According to their origin, they are referred to as consumer surplus (also referred to as "Ohio") and contingent valuation (also referred to as "Florida"). The differences between them can be seen in Table 1. Other world studies draw on information from these crucial studies, inspired by both the calculation process and the results and the widening of the different valuation methods.

*Table 1: Differences between the Florida and Ohio methods for valuing public library services*

Criterion	Contingent valuation (Florida)	Consumer surplus (Ohio)
Year of research realization	2004, 2008, 2013	2005
Number of libraries monitored	12 selected libraries	9 selected libraries
Monitored levels	Macro level	Mezo level

Libraries monitored services	13 services	Direct and specific services
Method used	CBA (ROI), REMI	CBA (ROI)
Benefit rating method	Contingent valuation, volume of speculative investments from public budgets	Surplus of the consumer with the help of the identification of library acquisition costs
The way of asking the readers	Personal and telephone conversations	Questionnaire survey
Result of benefits	They were not assigned to individual services	They were splitted into individual services
Input data for economy analysis	From library accounting reports	From library accounting reports
Cost-effectiveness	They were not allocated to individual services	They were not allocated to individual services
The value of ROI	6,54 (2004), 8,32 (2008), 10,18 (2013)	3,81 (2005)

Source: own processing based on studies Griffiths et al. (2004), Hass center (2008, 2013), and Levin (2006)

The study explored more attention was paid to the application accessing the determination of the form of WTP, that appeared in studies with a larger number of issues of this kind, which have been elaborated in more detail than questions such WTA. At the same time, all of the above studies show a WTA value several times higher than the WTP value.

In 2012 the Municipal Library of Prague focused on contingent valuation was conducted in the Czech Republic. The research was carried out by sending an on-line questionnaire survey to library users sent to the email. The base file was read by 11397 readers and the number of answers received 2227, the return was 20 %. The research data was verified on a series of investigations in the same year in the Municipal Libraries in Tábor and Uherské Hradiště. Most questions were asked to type WTP. The result of the elicitation approach of willingness to pay is the average value of CZK 595.72. Result of the WTA elicitation approach - The willingness to receive compensation for non-use of the service was worth CZK 1797.61. Thus, in the case of the Czech Republic, it was confirmed that WTP values are lower than WTA values. The resulting ratios between the WTA and WTP elicitation approaches are shown in Table 2 below.

Table 2: Ratios between WTA and WTP elicitation approaches according to selected studies

Source	Country	WTA	WTP	WTA:WTP
Holt, 1999	USA	136 mil. USD	15 mil. USD	9,0 : 1,0
Pung et al., 2004	Great Britain	273 GBP	116 GBP	4,9 : 1,0
Aabø, 2004	Norway	2000 NOK	400 NOK	5,0 : 1,0
Sociores, 2013	Czech Republic	1797,61 CZK	595,72 CZK	3,0 : 1,0

Source: own processing according to Holt et al. (1999), Pung et al. (2004), Aabø (2004), Sociores (2013)

The values shown show that the value of accepting the compensation for the library service is several times higher than the willingness to pay for the service. At the same time, it is necessary to draw attention to the fact that the resulting WTP values are the result of more detailed inquiries, as the surveys are more focused on this value, while the value of the WTA remains slightly neglected, and its values are, as a rule, devoted to just one question.

Research in 2012 also dealt with the question of willingness to pay for lending any book from the antiquarian bookshop as an alternative to the library. The resulting value per borrowing is CZK 71. The consumer surplus method was applied in the Czech Republic only in 2005, in order to refine the value of library borrowing from previous research. In this context, an empirical survey was carried out in randomly selected antiquarian books and,

according to the results of the investigation, the average purchase price of a book in the antiquarian books was set at CZK 200. At the same time, the average market price of the book on the Czech market in 2014 (latest available data) was CZK 294 per book (Pistorius et al, 2015). This amount represents the value of the cost of purchasing a book. To determine the consumer surplus it is necessary to deduct the amount the reader obtains from the sale of the book to the antiquarian bookshop. This results in a consumer surplus of CZK 94 (purchase at a market price of CZK 294 - purchase of an antiquarian CZK 200). It follows from the above that the issue of the value of absent borrowings has already been extensively investigated and that each research method brings different results.

#### **4. Discussion**

After studying, it is possible to evaluate the methods of determining the benefits of library services in the Czech environment as follows:

- it is advisable to use the combination of CV and consumer surplus questions to complement the results obtained by the methods,
- the consumer's surplus method, due to the market valuation of books, does not have a subjective component included, and therefore is more accurate, better describes the market prices of books in the Czech environment, at the same time it is a more direct and faster way of applying the method,
- the elicitation method of contingent valuation has greater demands on data acquisition and processing, the method is more complicated and time consuming,
- for selecting questions, it is important to take into account respondents in order to find out the most accurate value of benefit,
- for selecting respondents, it is important to take into account the criterion of the last visit to the library by the respondent,
- studies are progressing in more detail on WTP application access, studies also contain a larger number of WTP types than WTA,
- the willingness to accept compensation for library services (WTA) is several times higher than the willingness to pay for services (WTP),
- the differences between WTA and WTP can be determined by their WTA: WTP, but for generalization it would be necessary to carry out a significant empirical survey. The observed value for the Czech Republic of 3.0 : 1 is to be seen only as indicative, studies abroad show differences between the values even more pronounced,
- based on the above, it is good to consider whether to exclude the WTA application approach for future research. In practice, it is preferable to use the WTP elicitation approach.

#### **5. Conclusion**

The article discusses the differences in methods in addressing the value of utility provided by public library services. The method of consumer surplus and contingent valuation, which was most used in world studies, was also applied in the conditions of the Czech Republic and confirms the difference in the values obtained. Also eliciting approaches WTP and WTA (contingent valuation) bring values that differ significantly. From the point of view of the use of library services, borrowing services are most used, but in today's globalized society, the importance of residential and community services is increasing, when citizens begin to

perceive the library as a meeting place with other Aabo (2005). As a result, the library as an institution changes its role, offers new services (e-books or more cultural events) and adapts to the evolution of society in the context of electronization and other changes in a globalized society.

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