Enhancing Methodologies to Measure the Value of Library Services

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Young Man Ko, Wonsik Shim
Department of Library & Information Science
Sungkyunkwan University
Seoul, Korea

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- ROI = 3.66*

* From a recent study of economic value of public libraries in Korea (2009)

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Background

- Some people may argue that the benefits of using libraries are largely intellectual and of the mind, and thus not lend to quantification.

- There is some truth in the statement. But we've gotten past that line of thinking long time ago.

- We need better tools to demonstrate the value (benefits, impact) of library and information services beyond inputs and outputs.

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Background

- ROI (& B/C ratio) is one attempt to show value in a way that many people can understand and recognize.

- This technique is widely used in other sectors that involve public goods, non-profit works, public institutions. Now we have quite a number of studies applied to libraries.

- Now we can say that libraries deliver significant benefits to our institutions, communities and society, based on relatively reliable measurement techniques used in other comparable sectors.

Economic Value Studies are useful because:

- They show **outcomes** not inputs or outputs.

- The results (ROI, B/C ratio) **stick**.

- They reflect the interests of **multiple stakeholders** of libraries and information services.

Many economic value studies of libraries published

Aabø(2009) did a meta analysis of 38 ROI results.

Chung et al. (2009) did another meta analysis of 42 ROI studies done both domestically and abroad.

Many national, state, and local libraries have done their version of economic value studies: British Library, Florida, South Carolina, Pennsylvania, Indiana, Vermont, Wisconsin, San Francisco, Saint Louis,….

Handful of studies of libraries in Korea

Many studies focus on public libraries reflecting their unique operating environment.

Methods of economic valuation of libraries

1. SPM (Stated Preference Method)
    - Popular approach in the absence of comparable market price
    - CVM (Contingent Valuation Method) is most widely use.
    - Value is derived from verbal response of users

2. RPM (Revealed Preference Method)
    - Applies methods such as consumer surplus, opportunity costs
    to indirectly measure the library service value

Outcome of library economic valuation

Depends largely upon a number of elements including, but not limited to,

- Scope of measurement (services included)
- Use of measurement methods
    - SPM vs. RPM
    - different applications of CVM
    - existence of alternatives

Methodological choice: potential threat to the validity & credibility of results

Applying CV (Contingent Valuation) method

Many economic valuation of public goods (non-market goods) employ CVM to derive how much people (users, residents, …) are willing to pay for those services.

Picking a proper CVM is a difficult decision that takes into consideration of local context and population characteristics.

In practice, the choice of CVM scenario, payment method, provision of reference information and payment frequency all contribute to the magnitude of WTP data.

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Baseline Study:
Economic Value of Public Libraries in Korea (2009)

- Sample: 22 Libraries (pop. 600), 1,220 library visitors
- Data Collection: face-to-face questionnaire
- Value Measurement: WTP using CVM with tax payment
- Response Type: double bounded dichotomous choice
- Services Measured: Library Materials, Library Space and Cultural Programs (measured separately then combined)
- Total WTP per person: US$ 96.3
- ROI = 3.66
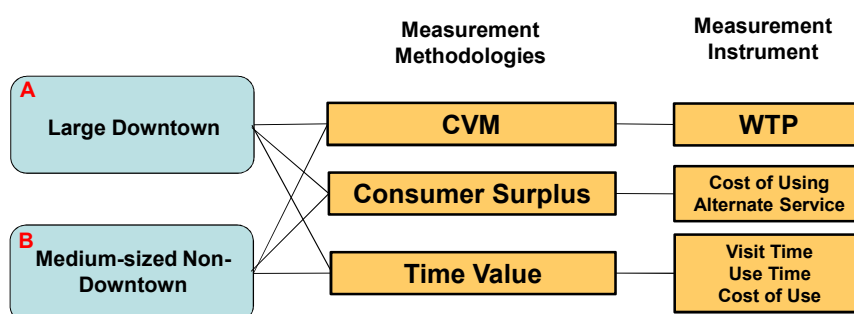
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Methodological Exploration Study (2011-2012)

(1) Comparison of 2 public libraries, one inner city (large) and the other one in outer city (medium sized).

(2) Comparison of 6 public libraries of varying sizes (large, medium sized & small), locations, and operating environments

* Research funding provided by the National Research Foundation of Korea (≈US$260,000).
** The study also includes examination of economic valuation methodologies for research library services. Project results are forthcoming.

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Test with 2 Public Libraries

Measurement Methodologies   **Measurement Instrument**

A
Large Downtown

B
Medium-sized Non-Downtown

CVM — **WTP**

Consumer Surplus — **Cost of Using Alternate Service**

Time Value — **Visit Time Use Time Cost of Use**

Applying CVM

- ❑ **Fictional Scenario: Additional Taxation due to Budget Cut**
- ❑ **Payment Method: Monthly Tax**
- ❑ **Question Type: Open ended**
- ❑ **Reference Information: Tax payments for selected public service**
- ❑ **Face-to-Face Interview**
- ❑ **From Library A: 114 registered users, 73 non-users**
- ❑ **From Library B: 67 registered users, 47 non-users**

Results from CVM

	Library A	Library B
Users	₩ 9,330	₩ 12,097
Non-Users	₩ 6,696	₩ 7,272

* ₩ 1,000 ≈ US$ 1

Results from CVM application

% of Non-use Value Reponses

	Library A	Library B
Option	**31.4%**	**44.6%**
Altruism	**13.4%**	**16.8%**
Bequest	**14.2%**	**13.9%**
Cultural heritage	**15.3%**	**13.4%**
Existence value	**24.6%**	**10.9%**

Time Cost and Cost of Using Alternative Service

	Library A	Library B
Cost of Use	₩ 7,023	₩ 4,707
Travel Time	39 mins	27 mins
Use Time	2 hrs 30 mins	2 hrs 45 mins
Cost of Using Alternative Service	₩ 9,961	₩ 9,856

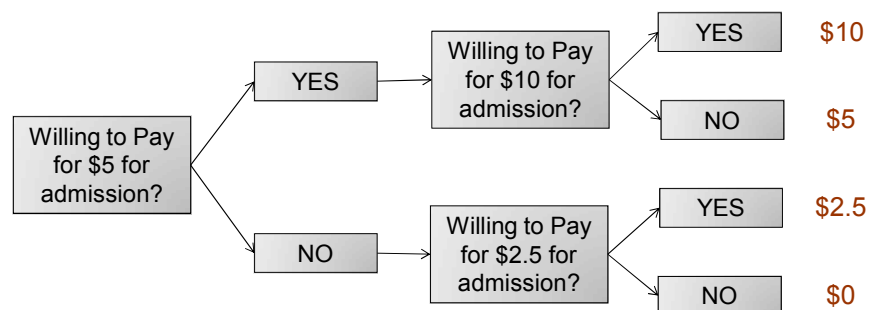* ₩ 1,000 ≈ US$ 1

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ROI Figure variations

Value Assessment	Library A	Library B
Use Cost	1.5	2.3
Alternative Service	0.64	2.5
WTP (Users only)	2.0	5.9

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Results from the 6 Libraries Study
* 1,332 respondents: 766 users, 566 non-users

Used <u>Double Bounded Dichotomous Choice</u>

Results from the 6 Libraries Study

Users vs. Non-users

❑Average WTP amounts from library users vary
₩ 6,292~7,761 by library
❑For non-users: ₩ 3,767~5,616
➢If you don't include value assessment from non-users (intrinsic value), you are missing out at least 30% of additional value amount.

Results from the 6 Libraries Study

Effect of reference information

Water Bill	12,940/month
Vehicle Tax	22,750/month
Resident Tax	6,000/month

There was no difference in WTP amounts.

• with reference information: ₩ 5,734
• without: ₩ 5,689

Results from the 6 Libraries Study

Effect of Library Use Experience on WTP Amounts

Clear demarcation between heavy users (> 4 times/week)
and occasional users (less once a month)

Heavy users' WTP Average: ₩ 7,889
Occasional users' WTP Average: ≈ ₩ 4,000

Results from the 6 Libraries Study

Effect of Having Alternative Service

Average WTP of people with alternative service: ₩ 7,209
                                    w/o alternative service: ₩ 5,209

Explanation: More than 60% of respondents who had no
alternative service are students and housewives.

Results from the 6 Libraries Study

Effect of Questioning Type

	Open ended	DBDC
2 Libraries Sample	₩ 8,254~10,149	
6 Libraries Sample		₩ 5,711
Pretest for a National Sample	₩ 18,506	₩ 9,297

 * All figures are based on average.

Measurement of economic value and ROI of public libraries

Different methodological choices give results with varying outcomes.

All these measurement decisions potentially threat the validity of ROI and B/C

If you know what is being done, it can be difficult to say "to make a long story short."

So what do we do with library value studies?

Despite many theoretical and practical issues, they still provide insights that could not be obtained otherwise.

We should do away with the thinking that the ROI value is the value of library services.

Results of library valuation studies provide an opportunity to rethink about the value (outcome, benefits) of library and information services from a different perspective.

Two different uses of results from library value studies: evaluation vs. marketing (Kim 2011)

Conclusion

Much care is needed for **reliable and comparable study design** and implementation.

Recognize limitations of different methodological choices.

Collect **qualitative data** is always recommended to understand what is going on. A single ROI figure is not enough.

Think of results from a valuation study as **tools for learning and communication** both internally and externally.

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Thank You

Young Man Ko & Wonsik Shim
ymko@skku.ac.kr, wonsik.shim@gmail.com
Sungkyunkwan University