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Patterns of perceived public library outcomes in five countries

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Abstract

Purpose – The purpose of this paper is to compare the perceived benefits of public libraries between five culturally different countries: Finland, Norway, the Netherlands, South Korea and the USA.
Design/methodology/approach – The data were based on representative samples of Finnish, Norwegian, Dutch, Korean and American adult library users. In Finland a mail survey was used and in other countries web surveys were used for data collection. The distribution of the proportion of those benefiting from the library in various areas of life at least sometimes was compared across countries. The pattern of benefits was compared across countries by forming four outcome indexes from the 19 benefit areas. The differences in the outcomes between the countries were explained by demographics and library use variables.
Findings – The intensity of perceived benefits differ considerably, with the Finns and Americans reporting a higher level of benefits than the South Koreans, who in turn derive more profit than the Norwegians and the Dutch. The large difference in library supply between Finland and other countries may explain the differences in the perceived benefits in part of other countries but the USA.
Research limitations/implications – The study covered only some socio-economic and library usage factors as independent variables explaining the variation of benefit patterns. A more thorough analysis of library supply between the countries may explain some differences in perceived benefits.
Practical implications – The policy implications of these findings are discussed.
Originality/value – This is the first across-country study comparing and explaining the patterns of perceived benefits between culturally different countries.

Keywords Public libraries, Benefits, Survey, Library users, Outcomes, Cross-country comparison
Paper type Research paper

1. Introduction

Research on public library outcomes has expanded from evaluating the outcomes provided by individual library programs or libraries to surveying how public libraries benefit citizens in a particular country (Streatfield, 2012; Vakkari *et al.*, 2014). The studies focussing on individual libraries are important in informing library policy at municipal level, but they cannot shed light on the larger social role of public libraries

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and policy decisions at national level. It is important to know how the public library is performing on a national scale in addition to a local scale. There are only a handful of studies analyzing public library outcomes on a national level. For example, there are studies on public libraries' return of investment in some countries (Aabø, 2009) and on public libraries' perceived benefits in Finland (Vakkari and Serola, 2012) or in the USA (Lance *et al.*, 2001).

Studies comparing public library outcomes across countries are rarer still than nationwide studies on outcomes. Both the scarce tradition of countrywide studies, and the challenges of between-country comparisons (Harkness *et al.*, 2010; Hasebrink, 2012) have not favored cross-country comparisons in the LIS field. These studies are essential to better understand the mechanisms producing variation in the perceptions of benefits. It is important to know whether the benefits vary across countries and if they do, which factors are associated with this variation. Comparative studies may reveal patterns, which are not visible in a particular country, and thus proportionate empirical findings typically presented as universally valid.

There have been a few studies surveying public library outcomes in various countries. A large-scale cross-European survey in 17 countries focussed on perceived benefits of public access computer (PAC) and internet services (Quick *et al.*, 2013). Covering a broader range of services, a survey in six African countries explored the benefits people derived from using public libraries (EIFL, 2011). Vakkari *et al.* (2014) compared the outcomes of public libraries in 19 areas of life in Finland, Norway and the Netherlands. In comparative studies in LIS in general, it has been scarce to overcome pure descriptive analysis for properly identifying and comparing factors producing variation in the phenomenon of interest (Lor, 2014). The studies typically lack analysis of those factors, which would explain the variation, e.g. in the perceived benefits.

The aim of this study is to compare the perceived benefits of public libraries in five countries: Finland, Norway, the Netherlands, South Korea and the USA. The study is based on replicating a Finnish survey instrument including 19 benefit areas (Vakkari and Serola, 2012) in the countries mentioned. Our previous study compared three culturally similar countries, Finland, Norway and the Netherlands (Vakkari *et al.*, 2014). This study extends our comparison to countries culturally different from the three welfare states in Northern Europe, to South Korea and the USA. Although there may be many qualified countries, we have included the countries where researchers showed their interest in the participation in the cross-country comparison study.

To make meaningful comparisons, we should select comparable countries about the same level of economic and social development, since public library services are provided by countries with a certain level of social infrastructure. Being an OECD member country is a useful criterion to demonstrate that a country has a certain level of social and economic infrastructure. At the same time, the compared countries should be diverse enough so that we can test if Vakkari and Serola's (2012) scale is robust so that it can be widely applicable. In this sense South Korea as well as the USA are legitimate inclusions. For the diversity, South Korea and the USA are founded on considerably different cultural and institutional foundations than the three Northern European welfare states.

World Value Survey's cultural map is based on Inglehard and Welzel's hypothesis that there are two major dimensions on cross-cultural variation in the world: traditional vs secular-rational values; and survival values vs self-expression values. The first ones emphasize the importance of religion, deference to the authority and traditional family values, whereas secular-rational values have opposite preferences to the

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traditional values. Survival values place emphasis on economic and physical security, while self-expression values give high priority to tolerance toward other people with varying characteristics and participation in decision-making in political and economic life (World Value Survey, 2015).

In the cultural map along these two dimensions South Korea is more survival-oriented country than the three European countries and the USA, while the USA is a more traditional country compared to the other four countries. Thus, compared to the European countries in the USA more traditional values like religion are emphasized, while in South Korea economic security is preferred more than in the remaining four countries (World Value Survey, 2015).

The study consists of comparing the distribution of perceived benefits between the countries observed, and explaining the variation in the patterns of benefits across the countries by using quantitative multivariate analyses. The specific research questions are:

RQ1. How commonly do adult library users benefit from the public library in various areas of life in the countries observed?

RQ2. Does the pattern of perceived benefits vary between the countries?

RQ3. If so, which factors could explain the variation in perceived benefits between the countries?

2. Literature review

Outcome metrics focus on the benefits libraries bring to the users. Outcomes can be defined as "benefits to people: specifically, achievements or changes in skill, knowledge, attitude, behavior, condition, or life status for program participants" (Institute of Museum and Library Services, 2013, para. 2). Few large-scale nationwide outcome studies exist that survey the public on how in their lives they benefit from public library services in a wide range of areas (e.g. their social, economic and cultural lives). Cross-national studies of public libraries outcome are rarer still.

2.1 National-level research on public library outcomes

Compared to research on the perception and use of library services (e.g. Marcella and Baxter, 2000; OCLC, 2011; Pew Research Center, 2013), national research on public library outcomes is scarce. In the latter group of research, a large portion of it sought to capture library outcomes using economic measures (Arts Council England, 2014). These economic metrics quantify the direct and indirect benefits public libraries bring to the society in monetary terms.

Beyond outcome metrics in monetary terms (Aabø, 2009; Aabø and Audunson, 2002; Imholz and Arns, 2007), measures showcasing a wide range of social benefits are needed. For example, through interview and focus group discussion, the New Measures for the New Library project in the UK demonstrates the importance of measuring public libraries' social contributions (Linley and Usherwood, 1998). In addition to economic impact and roles that the project identified as established (i.e. roles in culture, education, reading and literacy, leisure and information), the research shows that libraries also serve a social and caring role. This includes roles in social cohesion, community empowerment, sustaining local image and identity and promoting the welfare of vulnerable seniors (Linley and Usherwood, 1998).

Public libraries' social and cultural values are often reflected in the literature and in official reports of library institutions (Poll and Payne, 2006; Rubin, 2006). The Canadian

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Library Association, for example, gathered statements and "quotable facts" from various stakeholders (such as politicians, community leaders, library leaders and library users) about the value of Canadian libraries (Schrader and Brundin, 2012a). The resultant report, Values Profile of Canadian Libraries (2012), presents 251 value propositions concerning public libraries (Schrader and Brundin, 2012b). The study did not group the statements into categories. Even so, one can still gain a sense from the document that many of the values discussed are educational and social in nature (e.g. promoting literacy, nurturing personal growth, facilitating new-comers' acculturation and cultivating a sense of community).

Both the British and the Canadian project used a qualitative approach. In addition, the quantitative approach, typically the population survey, has been used. Among the few nationwide studies, the US IMPACT study surveyed 50,000 US respondents. This study focussed on the usage and outcomes of only one type of public library service – that of public library computer and internet services (Becker *et al.*, 2010). A study that does cover a range of public library services is Lance *et al.* (2001) survey of US library users. The study included users of 45 public libraries. Respondents were asked to indicate whether public libraries benefited them in 67 areas, which were grouped around six core library service categories: basic literacy, business and career information, library as a place (communal), general information, information literacy and local history and genealogy.

Instead of categorizing the outcomes based on library service types, Vakkari and Serola (2012) provide a different approach that conceptualizes outcome categories in terms of the everyday life of individuals. Developed for a nationwide study in Finland, the survey instrument and outcome categories were built on the literature of human goals and life tasks (Chulef *et al.*, 2001; Meegan and Berg, 2001). A list of 22 areas were identified, covering benefits in different dimensions of life such as education, work and business, everyday activities and leisure-time activities. Respondents rated the extent to which public libraries benefit them in the 22 areas. The most commonly perceived benefits were found to be in the areas of fiction leisure reading, non-fiction leisure reading, and self-education during leisure time (Vakkari and Serola, 2012). Factors predicting the major outcome categories were tested with multiple regression models (Vakkari, 2014).

2.2 Cross-national research on public library outcomes

Cross-country assessment is recognized as valuable for better governance and informing policy choice (Markless and Streatfield, 2013). The Global Libraries Initiative, for example, developed a framework for impact planning and assessment. The assessment plan is incorporated into the library development projects of the participating countries (Streatfield, 2012). Currently, cross-national studies of public library outcomes are in their nascence; only a few studies are available. One of them is a study on the perceptions of public libraries in six African nations: Ethiopia, Ghana, Kenya, Tanzania, Uganda and Zimbabwe. Four of the six countries conducted a survey of users and non-users. The survey included questions on the perceived benefits of public libraries. The top-ranked benefits were found to be: developed new skills or learned something new; obtained new ideas, new interests; and got helpful information for school/learning (EIFL, 2011).

Another large-scale study is a cross-European survey focussing on PAC and internet services in 17 countries (Quick *et al.*, 2013). The project includes a general public survey of 17,816 respondents, a library user survey with 24,253 respondents and qualitative

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group discussions and interviews. While between-nation differences are not the core focus of the report, country statistics are available on some items. Some discussion also touches on similarities and differences across nations (Quick *et al.*, 2013).

The survey instrument created by Vakkari and Serola (2012) informed the development of similar national surveys in Norway and the Netherlands, which opened up an avenue for empirical cross-national comparison (Vakkari *et al.*, 2014). The comparison showed that the level of perceived benefits almost in all areas was significantly higher in Finland likely due to the better supply of library services.

3. Public libraries in the countries observed

3.1 Basic figures: resource allocations to libraries and accessibility

There are large differences between the countries, with Finland far ahead of the four others along all resource dimensions Table I). The operating costs in Norway are 66 percent of those in Finland, in the Netherlands 58 percent, in the USA 44 percent and in South Korea 15 percent. One clear indication on the higher priority given to libraries in Finland is that Finland has a substantially lower per capita GDP compared to Norway and the USA (61 percent of the Norwegian and 79 percent of the American) and also somewhat lower than the Dutch per capita GDP. In spite of this, allocations to public libraries are much more generous than in the three other countries.

Indicator	Finland	Norway	The Netherlands	South Korea	USA
Population	5,347,269	4,920,305	16,655,799	50,734,284	311,591,917
GDP per capita €[a]	28,900	47,500	32,900	22,666	36,486
Municipalities	320	430	418	244	3,141 counties
Main libraries	308	430	163	574	9,050
Branch libraries	486	314	736	212	7,654
Libraries in total	794	744	899	786	16,704
Book mobiles (stops)	153 (12,378)	29 (1,272)	–(927)[c]	1,126	696 (–)
Opening hours	1,399,355	805,000	–	3,050,268	36,399,173
Manpower years	4,756	1,783	5,030	7,369	137,364
Operation costs per capita €	58.03	38.46	33.90	8.65	25.30
Collection items per capita	7.4	4.3	1.8	1.5	2.9
Collection books per capita[d]	6.6	3.8	1.7	1.4	2.6
Loans per capita	18.2	5.1	6.0	2.4	8.1
% borrowers in population	39.2[e]	21.1	24.1[b]	35.3[b]	55[e]
Visits per capita (physical)	9.9	4.4	4.4	5.3	4.9

Notes: [a]Eurostat tables: gross domestic product at market prices; [b]the Dutch and South Korean statistics concern inhabitants with a membership card of a public library; [c]missing information; [d]collection items per capita include printed books, journal and newspaper volumes, and audiovisual media such as music (CDs), audiobooks and films (DVDs); [e]percent of registered borrowers in the population

Sources: Library statistics Finland (2011) (http://tilastot.kirjastot.fi/en-GB/basicstatistics.aspx); Library statistics Norway (2011); Statistics Netherlands (2016); Koninklijke Bibliotheek (2016) (http://bibliotheekmonitor.nl/)

Table I.
Basic data on public libraries in 2011 in the countries compared

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South Korea represents a special case. Operation costs per capita is very low, and the country's allocation to public libraries is more modest than its per capita GDP would indicate. South Korea's per capita GDP is, for example, 78 percent of the Finnish and 47 percent of the Norwegian, whereas operation costs per capita is 15 percent of the Finnish and 22 percent of the Norwegian. However, budgetary allocations to Korean libraries are on their way up with an increase of 66 percent during 2007-2012. Norwegian libraries, although on a much higher level in operation costs, are moving in the opposite direction. Between 2000 and 2010 net operating costs were reduced with four EUR per capita in constant prices. Comparing Norway and South Korea, one interesting question is: what is most important – the absolute size of allocations per capita or being in an upward or downward trend?

An indicator of accessibility is probably opening hours. We have figures for opening hours for all countries except the Netherlands. If we suppose that libraries are open to the public 50 weeks per year, we can calculate the average weekly opening hours per library unit: 21 hours per week in Norway, 35 in Finland, 43 in the USA and 77 in South Korea.

Another important dimension of accessibility is the users' access to professional staff members. Here the Finns are by far best off, with only 1,124 inhabitants per full-time staff employee in the library. The USA is on second place with 2,268 inhabitants per staff member, Norway on third place with 2,759 inhabitants, the Netherlands on fourth with 3,311 and South Korea on fifth place with 6,884 inhabitants per full-time staff member.

Summing up basic figures and accessibility, the Finns seem to enjoy generous allocations to public libraries, with high operation costs per capita, high accessibility to help from professional staff and good opening hours. Although operation costs per capita in the USA lag considerably behind Norway as well as the Netherlands, library users in the USA enjoy higher access to library staff than both Norwegian and Dutch users, and they enjoy much more generous opening hours than Norwegian users do. These figures might lie behind the very high score in Finland when it comes to loans and visits per capita, and also the high US score on these indicators compared to Norway, the Netherlands and, as for loans per capita, South Korea. It can be expected that the frequency of use of the library is associated with the increase in the perceived benefits.

South Korea lags behind the other countries on most indicators of resource allocations and access, but opening hours seem to be generous – a factor, which might explain the relatively high number of visits per capita in spite of low operation costs. A high number of visits combined with low operating costs are likely due to the fact that a large proportion of Koreans use public libraries just to secure a self-study space by bringing their own books. Self-study space does not involve much operating costs such as costs for collection and reference staff.

3.2 Library legislation

The responsibility for public libraries rests primarily with the local government in the countries compared, with the exception of South Korea, which is a more centralized country. In South Korea 40 percent of the funding for public libraries comes from state level, 30 percent from city level, 20 percent from the district government and 10 percent from other sources. In Finland, the Netherlands and Norway, the national level does take an interest in library politics, even though the main responsibility lies with the local government. All these countries do, for example, have a national legislation on public libraries, making it compulsory for local governments to uphold a public library service (Finland, Norway) or to consult neighboring municipalities before closing one's

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own (The Netherlands). In all these countries the national-level finances wholly or partly some services which are regarded to be a national responsibility, e.g. the multilingual library in Norway, and the ministry responsible for library policy supports developmental projects in municipal libraries. The USA has the most decentralized structure, probably resulting in greater differences between local governments in allocating resources to public libraries than in the other four countries.

In the four countries with library legislation[1], the role and mission of public libraries as stated in the law, seems to vary somewhat. The common feature in library laws in those countries is that the mission of public libraries is defined broadly. For example, Finnish public libraries shall "promote equal opportunities for citizens to pursue personal cultivation, literary and cultural interests, continuous development of knowledge, personal skills and civic skills, internationalization, and lifelong learning." Also US public libraries have a broad role and service focus, describing themselves as institutions providing and facilitating access to information rather than focussing more singularly on its education and cultural roles.

4. Research design

4.1 Data collection procedures

The purpose of the cross-national research project was to examine whether the perceived benefits from public library services vary across the five countries compared. The survey data were collected in each country using slightly different data collection procedures as described below.

In Finland, a postal survey was undertaken from the general adult population. A random stratified sample of 6,000 persons between 15 and 80 years of age was drawn from the population. The data collection took place between May 18 and July 31, 2010. In total, 1,000 completed questionnaires were returned, yielding a response rate of 16.7 percent. The Finnish sample was characterized to over-represent females and the highly educated citizens.

The survey in Norway took the mode of a web panel. The sample was drawn from the general adult population who were between 18 and 80 years old. The data were collected during the last week of September 2011. A total of 1,001 respondents have completed the questionnaire. Characterizing the Norwegian sample, the gender distribution was well-balanced yet it was biased toward the highly educated.

The data in the Netherlands were collected via a web panel. The sampling procedure started with screening the participants from a panel of approximately 130,000 persons with a question asking whether or not they visited a public library during the past 12 months either physically or online. It resulted in identifying a total of 68,742 public library visitors in the past 12 months (44.0 percent). A web survey was conducted between 21 and September 28, 2012, targeting 1,000 users and 500 non-users who were between 15 and 80 years old. It resulted in 1,025 public library users and 477 non-users who completed the survey. The collected data were weighted by use, gender and education level to adjust the oversampling problem and to enhance the representativeness of the sample.

The survey conducted in the USA also used a web panel. The target population was adults who were 15 years old or above. The survey was conducted in December 2012. A total of 1,010 respondents returned completed questionnaires. The US sample was biased toward the young and the highly educated population.

Lastly, the data collection in South Korea also took the web survey, recruiting a sample of 1,000 participants from a web panel. The sampling plan was pre-arranged to ensure a national representative sample with respect to gender, age and geographic

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regions. It targeted to recruit 700 public library users and 300 non-users, which resulted in 702 users and 298 non-users. The sample characteristics of South Korea were similar to those of the USA, which were over-representing the young and the highly educated.

Comparing the data sets of the five countries, Finland was the only country that employed stratified random sampling using the self-reported mail questionnaire. The low response rate (16.7 percent) of the Finnish sample can be problematic due to survey participants' self-selection bias, bearing in mind that this level of response is not unusual to a survey research administered to general citizens. There is little empirical support for the notion that low response rate surveys *de facto* produce estimates with high non-response bias (Groves, 2006). The other four countries employed online panels for data collection. The samples of these countries may involve some degree of systematic exclusion of non-online users.

In order to have comparable data sets for the purpose of this study, we decided to manage the data in two aspects. First, we excluded from all data sets those respondents who had not used the public library within the previous twelve months. Literature on survey design indicates that respondents may not be able to recall accurately events and experiences that happened a long time ago (Podsakoff *et al.*, 2003). Focussing only on recent users can help reduce potential respondent error due to inaccurate recall of past experiences. The second treatment relates to varying age ranges in the samples across the countries observed. We included in the analysis only the participants within the range of 18-80 years old.

After these two treatments, the final sample size included in the data analysis were 777 respondents from Finland, 538 respondents from Norway, 887 respondents from the Netherlands, 625 respondents from the USA and 629 respondents from South Korea.

All five samples showed a relatively good geographical representation of the general adult population of each country (Table II). All three samples from European nations demonstrate a good representativeness of age distribution. Both USA and South Korean samples were biased toward younger people due to the nature of their web panels where older populations were less active in online participations. Regarding gender distribution, all but the Finnish sample demonstrates a good representation of national gender compositions. Women are more likely to have participated in a simple random sampling method, and they tend to be more frequent library users compared to men (Huysmans and Hillebrink, 2008).

Finally, all samples except the Dutch (after weighting) were biased toward highly educated population. Perhaps, the fact that the study was conducted in a web survey mode would be partially responsible because online users tend to be more highly educated than non-users. The highly educated are typically active library users, and therefore they are likely to be overrepresented in the data. This problem may be mitigated by the decision to select only the library users in the study sample. Overall, the findings of the study should be read with the nature of the samples in mind.

4.2 Measurement

The first research purpose was to examine whether the patterns of perceived public library outcomes vary among the five countries compared. Outcomes were defined as the benefits a system or service produces to its users (Rossi *et al.*, 2004). The perceived public library outcomes were measured by the extent to which the outcomes were said to have been actually experienced by the respondents. The second research purpose was to identify the factors that explain the differences in the outcomes in the major areas of life. The major research variables examined in this study are described below.

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Categories	Finland	Norway	The Netherlands	USA	South Korea
Population	15-80 years of age	18-80 years of age	15-80 years of age	15 years or older	18 years or older
Survey mode	Mail survey	Web survey	Web survey	Web survey	Web survey
Sampling method	Stratified random sampling	Internet panel	Internet panel	Internet panel	Internet panel
Total survey participants	1,000	1,001	1,502	1,010	1,000
Study sample: 18-80 years old who visited the library at least once a year	777	538	887	625	629
Geographic region	Representative	Representative	Representative	Representative	Representative
Age	Representative	Representative	Representative	Biased toward the younger	Biased toward the younger
Gender	Biased toward females	Representative	Representative	Representative	Representative
Education	Biased toward highly educated	Biased toward highly educated	Representative	Biased toward highly educated	Biased toward highly educated
Post-stratification (weighting)	No	Yes	Yes	No	No

Table II.
The samples compared to the population in the five countries observed

4.2.1 Dependent variables. The dependent variable of this study is perceived public library outcomes from public library services. The variable is composed of a total of 22 measures originally proposed by Vakkari and Serola (2012).

Following the Finland-Norway-the Netherlands comparative study (Vakkari *et al.*, 2014), for the sake of comparability, six items were collapsed into three items, which are the means of the original two items: "fun in reading" was derived from taking the average score of "reading fiction" and "reading non-fiction"; "developing job skills" was created by calculating the average of "developing job skills" and "work-related educational development"; and "outdoor activities" was derived from taking the average score of "outdoor activities, exercise, sports" and "interest in nature."

In order to enhance the efficiency of data analysis, the resulting 19 outcome measures were reduced to a smaller number of measures. Originally, Vakkari and Serola (2012) conceptualized the outcome measures as four-factor structure, namely, work and business, education, everyday activities and leisure activities. However, their factor analysis produced a modified three-dimensional structure by collapsing education and work/business into one dimension. Factor analysis conducted in the present study showed somewhat inconsistent results across the five countries, giving partial support for the three-dimensional conceptual distinction. Factor solutions from the Finnish, Norwegian and US samples produced the three-factor solutions, whereas in the Netherlands and South Korea a four-factor structure was more suitable. Considering these variations in factor solutions, it was finally decided to form outcome indexes based on the original four-dimensional conceptualizations: work and business, education,

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everyday activities and leisure activities. Below, the four dimensions relates to the 19 perceived benefits from using public libraries in major life areas:

(1) Work
   - finding jobs;
   - executing specific work tasks; and
   - developing job skills (combined with work-related educational development).

(2) Education
   - finding educational opportunities;
   - completing formal education (acquiring a degree); and
   - self-education during leisure time.

(3) Everyday activities
   - household;
   - childcare and schooling;
   - housing including home repairs;
   - consumer issues;
   - health;
   - travel and vacation; and
   - social relations.

(4) Leisure activities
   - fun in reading (combined reading fiction and reading non-fiction);
   - cultural activities (e.g. going to the theater or a concert);
   - creative activities (e.g. playing an instrument or singing);
   - outdoor activities (combined with interest in nature);
   - interest in history or society; and
   - participating in and following current events.

In the dimension of leisure activities reading may have a slightly emphasized role compared to other categories, which have been presented in a more generic way. This may have had an influence on the response of the participants.

Each of the following 19 items were measured in a four-point scale where "often" was coded as "3," "sometimes" as "2," "seldom" as "1," and "never or cannot say" as "0." The index for each dimension was formed simply by adding up the values of all the items and calculating the average in the respective dimension. The reliability of the indexes in a pooled data set of all five countries combined, indicated by Cronbach's α, was sufficient to good in all four benefit types: work (0.85), education (0.79),

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everyday (0.90) and leisure (0.85). The six correlations between the four factors are in the 0.69-0.79 range, indicating that the outcome types tend to co-occur, some specificity in each of the four outcome dimensions notwithstanding.

4.2.2 Independent variables. The second purpose of this study was to identify the factors explaining the variations in the patterns of the benefits across the countries, and the differences in the outcomes in the four major areas of life. Since the survey questionnaires administered in the five countries were not entirely identical, we adjusted the discrepancies by having the Finnish questionnaire as the reference. We included the following five independent variables for the study:

4.2.2.1 The frequency of library use. The frequency of public library use was measured in a five-point Likert-type scale: "Once or twice a year" was coded as "1"; "a couple of times in a half a year" as "2"; "about once a month" as "3"; "about every second week" as "4"; and "weekly/almost weekly" as "5." The rating scales used in both Norwegian and the Dutch surveys were slightly different. For example, in the Norwegian case, it was measured in a six-point scale, having one more scale "several times a week." This orphan scale was coded as "5" by assigning the most equivalent level of frequency.

4.2.2.2 The number of services used. The number of services used at least once a year was measured by a set of nine survey question items asking the respondents whether or not they had used such public library services at least once in the past 12 months. The services include borrowed books, read newspapers, read books, borrowed CDs, borrowed videos, used the internet, participated in activities, used reference services and spent time in the library. If a respondent answered to have used a service at least once a year or more, it was coded as "1"; and if the service was used less than that, it was coded as "0." Then, the scores obtained from all the nine question items were added up to compose the total score for the number of services used. The question items measuring this variable were generally consistent across all five countries, although there were a few variations in Norwegian, Dutch and South Korean versions, reflecting the uniqueness of each country's public library practices. These variations were adjusted by assigning the most equivalent values to those of the Finnish measures, the reference country.

4.2.2.3 Gender. Gender was measured as a categorical variable either men or women based on the self-report of the survey respondents from all five countries. Men were coded as "1" and women as "2."

4.2.2.4 Age. Age was measured in the number of life years by a self-report of the respondents in all five countries.

4.2.2.5 Level of educational attainment. The level of educational attainment was measured rather inconsistently reflecting each country's unique educational system. It was measured by an ordinal level of from five- to ten-point scales. To make the data analysis compatible, it was decided to collapse the variant measures into three categories. That is, the measures were converted into a three-point scale, namely basic-level education (i.e. a maximum of nine years of education), upper secondary-level education (i.e. a maximum of 12 years in education) and tertiary education (i.e. more than 12 years in education). Each of the three categories was coded as 1, 2 and 3, respectively.

4.2.2.6 Country. In the pooled five-country data set, a variable indicated the country of residence of the respondents. Using this categorical variable, it could be tested whether the differences between countries in perceived benefits of the public library

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found in the descriptive analysis were upheld after controlling for other variables (frequency of library visits, number of library services used, age and education) in a multivariate analysis of covariance. As such, the variable refers to as yet unknown factors influencing the library outcomes that differ between the countries.

5. Results

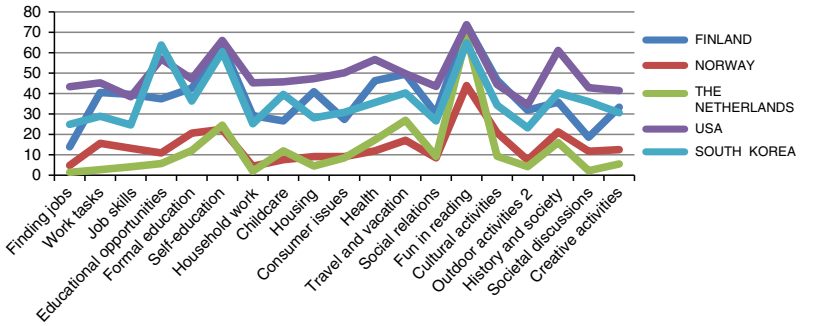
5.1 Benefit profiles (RQ1 and RQ2)

The patterns between all counties are relatively similar across all 19 benefit areas (Figure 1). However, the countries fall into two groups by the level of perceived benefits. In Finland, South Korea and the US users derived notably more common benefits from the library compared to Norway and the Netherlands. There is a significant difference in the level of perceived benefits in all 19 areas between these two groups (in all items: $p < 0.000$; Dunnett C: $p < 0.05$). Depending on the benefit area, the differences between the two country groups vary 15-35 percentage points. Americans seem to perceive most benefits almost in all 19 areas compared to others. Within the high-benefit countries, the USA trumps Finland and South Korea by a relatively higher level of benefits almost across all areas of life. Eight out of 19 differences are significant ($p < 0.000$; Dunnett C: $p < 0.05$). However, as we will show in the next chapter, controlling for library usage and demographic factors, decreases the differences between Americans and Finns in various benefit types, while the benefit levels of Koreans decreases somewhat. Therefore, these descriptive results should be considered with caution.

Library users in the USA perceived more even benefits across all 19 areas compared to other countries. The difference in the perceptions of benefits varied considerably more between these 19 areas in the other countries.

There are two considerable peaks in benefits across all countries, in self-education and fun in reading. The latter is clearly the most popular benefit among users in all countries. Interestingly, fun in reading is perceived among the Dutch about as common as a benefit as among Finns, Koreans and Americans, although in other respects the differences in the level of benefits remain.

As mentioned, fun in reading is the most popular benefit in all countries (Table III). About three out of four Finns and Americans, two thirds of Dutch and Koreans and over four out of ten Norwegians have experienced fun in reading as a result of their library use. Self-education is the second most common benefit in Finland, Norway and the USA, while it is third in the Netherlands and South Korea. Benefits in the



Note: $n = 3{,}428$

Figure 1.
The proportion of library users who have benefited at least sometimes in various areas of life in the countries compared (percent)

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interest in history and society are among the top five in Norway, the Netherlands, South Korea and the USA, travel and vacation are among the top five benefits in Finland, the Netherlands and South Korea.

5.2 Models explaining the variation of benefits (RQ3)

The descriptive analysis shows quite considerable differences between the countries in perceived benefits derived from public library services. However, as noted in the data collection section, all samples were skewed toward one or more of the variables gender, age and years in education. Only in Norway and the Netherlands a weight factor was constructed to post-stratify the samples. Hence it might be the case that the non-representativeness of the samples accounts for part of the differences. To judge whether this is indeed the case, multivariate analyses of covariance were conducted for each of the outcome scales (work, education, everyday and leisure) on a pooled data set with all respondents in the five countries included. In these analyses on unweighted samples, gender, age and education were included along with country, thereby correcting for these sampling inadequacies. Age and education were included as factors, thereby allowing nonlinearity in effects. Gender was coded as a dummy variable and could therefore be included as a covariate. Interactions between country on the one hand and gender, age and education on the other were entered as well.

Additionally, the other two independent variables, frequency of visits and number of services used, were entered to see if variation between the countries in visits and used services accounted for country differences in benefits. There is some indication that in front runner countries Finland, USA and South Korea the frequency of visits and (especially) the number of services used is higher than in Norway and the Netherlands (Figure 2).

The dependent variables were the standardized benefit scores (*z*-scores) in the four major areas: work and business, education, everyday activities and leisure activities[2].

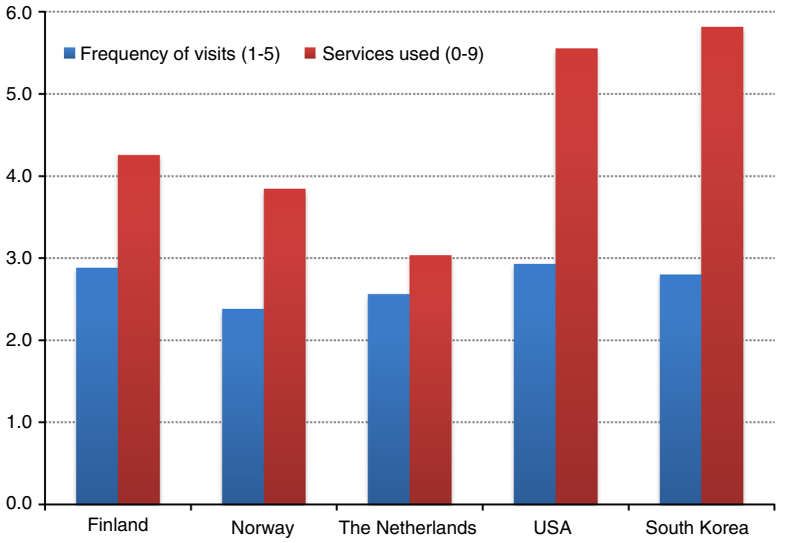
The question to be answered is whether "country" still has a significant effect on perceived benefits in the four areas after all the other independent variables have been controlled for. If not, it can be concluded that the way the public library system is organized and/or socially and culturally valued does not vary over the five countries. If it does, an explanation for the country variations should be searched for.

As is clear from Table IV, the influence of country on all four perceived benefits is still significant after controlling for background variables (some of which are not statistically significant). The substantial partial eta^2's range from 0.086 to 0.098 are

Table III.
The five most popular benefits in the countries compared (percent)

Finland	Norway	The Netherlands	South Korea	USA
Fun in reading (74)	Fun in reading (44)	Fun in reading (68)	Fun in reading (65)	Fun in reading (74)
Self-education (64)	Self-education (23)	Travel and vacation (27)	Educational opportunities (64)	Self-education (66)
Travel and vacation (50)	History and society (21)	Self-education (25)	Self-education (61)	History and society (61)
Cultural activities (47)	Cultural activities (21)	Health (46)	Travel and vacation (40)	Educational opportunities (57)
Health (46)	Formal education (24)	History and society (16)	History and society (40)	Health (57)

Note: $n = 3{,}428$



Note: $n = 3{,}428$

Figure 2.
Frequency of visits (Likert scale) and number of services used in the five countries (means, unweighted samples)

rivaled in magnitude only by those of the number of services used. Partial eta^2 indicates that compared to country, the number of services used has a greater effect on perceived benefits, in leisure activities and everyday activities, in particular. What is more, the statistical interactions between country and gender, age and education contribute significantly to the explanation of variance in perceived benefits in nine out of 12 cases. The influence of country is, in other words, all but explained away by either the socio-demographic composition of the country samples or cross-country variations in

	Work		Education		Everyday		Leisure	
	Sig (p)	Partial eta^2	Sig (p)	Partial eta^2	Sig (p)	Partial eta^2	Sig (p)	Partial eta^2
Factors								
Country	0.000	0.092	0.000	0.090	0.000	0.098	0.000	0.086
Age	0.000	0.017	0.000	0.040	0.034	0.004	0.104	0.003
Education	0.303	0.001	0.000	0.007	0.139	0.001	0.007	0.003
Covariates								
Gender (women)	0.171	0.001	0.112	0.001	0.222	0.000	0.468	0.000
Freq visiting PL	0.000	0.004	0.000	0.007	0.000	0.011	0.000	0.022
PL services used	0.000	0.100	0.000	0.087	0.000	0.142	0.000	0.130
Interactions								
Country × gender	0.000	0.011	0.000	0.006	0.009	0.004	0.195	0.002
Country × age	0.000	0.018	0.267	0.007	0.000	0.017	0.163	0.008
Country × education	0.000	0.021	0.000	0.015	0.000	0.016	0.000	0.015
Intercept	0.000	0.066	0.000	0.073	0.000	0.124	0.000	0.131
R^2 (adjusted)	0.452	(0.445)	0.484	(0.477)	0.469	(0.461)	0.448	(0.44)

Note: $n = 3{,}428$

Table IV.
Analysis of covariance of perceived benefits in four domains

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library visiting and usage. It is likely that the influence of country is mediated to a certain degree by the variation in library resources and in the supply of services across countries (cf. Sin, 2012; Vakkari, 1988).

All in all, the four analyses of covariance models explain between 45 and 48 percent of the variance in perceived benefits. The direction of effects is clear-cut for frequency of visits and number of services used: the more visits and services used, the higher the perceived benefits.

Women derive fewer benefits from public library services in the sphere of work than men, controlled for other factors. There is no gender difference in the other three domains for the countries combined. For age and education the picture is less clear-cut: effects of these factors (that were introduced as factors, i.e. on a nominal measurement level) are not monotonously climbing or declining with higher age or education within the separate countries. The direction and form of the associations seem to vary somewhat between the countries. For all countries combined, one can say that those with lower education level derive more benefits on all four spheres of life than the higher educated, who for their part derive more benefits than those with an intermediate level of education. Younger groups say they benefit more from the public library in work, education and leisure, whereas older groups benefit more in the "everyday" sphere of life.

Controlling for other independent variables, the analysis revealed a repeating pattern of benefits between the countries (Table V). Finns and Americans perceived about equally and significantly more benefits in all areas of life than users in other countries. Among the remaining countries, Koreans derived significantly more benefits in all four areas of life compared to Norwegians, while Norwegians benefitted more than the Dutch, except for "everyday" benefits.

A comparison of the results before and after controlling for other variables demonstrates that South Korea's position on the ladder declined somewhat, due to the skewedness of the South Korean sample toward the highly educated. The multivariate analysis has corrected for this sampling problem.

6. Conclusions and discussion

As unequivocal as the concept of the public library may seem – a place where professional staff collect and offer a balanced collection of books and other media to the general public – marked differences exist. This study has demonstrated that users in three European countries, one North-American and one East Asian country, perceive the benefits they derive from the public library rather differently. First, the intensity of perceived benefits differ considerably, with the Finns and Americans reporting a higher level of benefits than the South Koreans, who in turn derive more profit than the Norwegians and the Dutch. Second, when asked for benefits derived in 19 spheres of life, later grouped in the four dimensions of work, education, everyday activities and leisure, it becomes clear that the palette of benefits is broader and/or more balanced in some countries than in others. For example, in the Netherlands and to a lesser extent in Norway, the percentage of users reporting having derived educational benefits from public library services is markedly lower than in the other three countries. Whereas the Dutch report a similar level of benefits for "pleasure in reading" as the Finns, Koreans and Americans, they lag behind on all other benefits. Moreover, differences persist between countries in perceived benefits from public libraries when differences in socio-demographics and library usage variables are statistically corrected for. So even if the higher visiting frequency and the number of public library services used by citizens of

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Table V.
Estimated means for the five countries controlled for other factors

		Work		Education		Everyday		Leisure	
		Mean	Diff*	Mean	Diff*	Mean	Diff*	Mean	Diff*
a	Finland	0.395	cde	0.386	de	0.367	bcde	0.418	cde
b	USA	0.407	cde	0.378	de	0.476	acde	0.345	cde
c	South Korea	0.173	abde	0.348	de	0.148	abde	0.142	abde
d	Norway	−0.229	abce	−0.368	abce	−0.459	abc	−0.260	abce
e	The Netherlands	−0.566	abcd	−0.539	abcd	−0.427	abc	−0.468	abcd

Notes: $n = 3{,}428$. *Difference in estimated means significant at 0.05 level with: a, Finland; b, USA; c, South Korea; d, Norway; e, the Netherlands

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the "front runner countries" are accounted for, variance in perceived benefits remain. In concluding, possible factors responsible for this finding are discussed.

One such factor is the resources for and supply of library services. It is likely that the greater and qualitatively better the library services are, the more benefits the users may derive from the services (Sin, 2012; Vakkari, 1988). If the services differ notably between the countries, this may produce differences in the averages of perceived benefits on the level of the whole sample. Library resources and the supply of services per capita as indicated by Table I is clearly greater in Finland compared to other countries, while smallest in South Korea. Compared to Finland, operation costs per capita are 66 percent in Norway, 58 percent in the Netherlands, 44 percent in the USA and only 17 percent in Korea. These differences in funding are reflected in the provision of various services like manpower years or collection items per capita. Compared to Finland the manpower years per capita are 43 percent in Norway, 36 percent in the Netherlands, 53 percent in the USA and 18 percent in South Korea. The respective figures for collection items per capita are 58 percent in Norway, 24 percent in the Netherlands, 35 percent in the USA and 19 percent in South Korea. Thus, it seems that library services are largest in Finland and smallest in Korea.

These figures hint that library investments in various services vary between the countries. In Finland, investments seem to be high in the major service areas, while in Norway the emphasis is on collection, and in the USA it is on the use of manpower. This may refer to investments in other services than collection like community services in the USA. In the Netherlands and Korea, the investments are proportionally small.

The large difference in library supply between Finland and other countries may explain the differences in the perceived benefits in part of other countries but the USA (cf. Vakkari *et al.*, 2014). In other countries than the USA both library supply and users' perceptions of benefits are on a lower level compared to Finland. Diverging from the previous, in the US users derive at least as many benefits from the library than in Finland, although library supply in the USA is proportionally smaller. Thus, one has to look also for other factors contributing to differences in the benefits.

There is a cultural factor, which may in part explain the large proportion of Americans perceiving as very favorable the benefits compared to other participating countries. There is some evidence that US respondents tend more likely to show an extreme response style than do respondents of some Asian and European countries. The positive side of scales was more commonly used by Americans compared to South Koreans (Yang *et al.*, 2010) or Finns and Dutch (Harzing, 2006). However, it is evident that the tendency of Americans to respond more favorably covers only a limited part of the differences in perceived outcomes between the countries.

A possible factor that would deserve further exploration in future research is the public library policy context. What the statistical comparison does not show is how the public library as an institution is "framed" in politics, legislation and the policy narrative. Public libraries have historically been caught in various policy contexts and narratives. In the nineteenth century, they were conceived as social welfare, emancipatory institutions to help alleviate the life conditions of the working class (Black *et al.*, 2009). In the course of the twentieth century, their mission was recast in a human rights framework (equity of access to information to support democratic development), in cultural (promoting reading and literary culture) and in educational (supporting language acquisition and learning). These changing policy contexts have not affected all countries and local communities with the same intensity, nor did they take place in the same decades (if at all). One can see the differences across the globe

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today when one looks at the ministries and policy directorates under which the public library sector is subsumed. Looking for explanations in this direction was beyond the scope of the present study, but might be the way to move forward in future research.

The results also indicated that there are statistical interactions between country and gender, age and education. This hints that the direction of effect in these demographical factors may vary between the countries. While in some countries, e.g. aging may decrease the perceived benefits, it may increase them in others. This observation differs from that what is typically expected based on user studies, that library use and by implication perceived library benefits decrease by increasing age (Vakkari, 2014). In the studies to come it is important to elaborate these findings to reveal how demographic factors are associated with perceived benefits in the countries studied.

Notes

1. The USA has federal laws on libraries, e.g. Library Services and Technology Act, which provides funds primarily for developing technological infrastructure in library services. It does not, however, formulate general goals and policies for all public libraries to follow, like the library laws in the four other countries.
2. It should be borne in mind that all four dependent variables deviated from normality in that a considerable number of respondents reported no benefit at all in one or more of the four domains.

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