Comparing Books Held by Japanese Public Libraries: Outsourcing versus Local Government Management

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ABSTRACT

Background. In Japan, local governments have long managed public libraries; however, in 2003, organizations including private enterprises began to take over their management with the introduction of an outsourcing system, namely the "designated administrator system." Now, whether local governments should apply this system to public libraries is under discussion, and many argue that it is inappropriate for public libraries. Nevertheless, few studies have examined the actual differences in the services.

Objectives. The objective of this study is to clarify the differences between public libraries managed by this outsourcing system (henceforth, "outsourcing libraries") and those managed directly by local governments (henceforth, "direct management libraries") focusing on book collections and their circulations, since they are essential services for libraries.

Methods. We investigated books held by 373 outsourcing libraries and 2,556 direct management libraries considering the types of books such as Nippon Decimal Classification (NDC) categories. The sample used included 10,000 books published in 2013, and each library's holdings and circulations of these books were investigated using *Calil*.

Results. The results show that direct management libraries tend to hold novels more than outsourcing libraries, whereas outsourcing libraries tend to hold reference books more than direct management libraries. It was also found that the rates of books being borrowed in outsourcing libraries were higher than those in direct management libraries.

Contributions. The result of this study can be used when discussing which collections are more appropriate, that is, those in outsourcing libraries or in direct management libraries.

INTRODUCTION

In Japan, local governments have long managed public libraries; however, in 2003, organizations including private enterprises began to take over their management with the introduction of an outsourcing system, namely the "designated administrator system."

Although the number of public libraries managed under this outsourcing system (henceforth "outsourcing libraries") is increasing, whether local governments should apply this system to public libraries is under discussion. Many argue that it is inappropriate for public libraries and for their collection developments. Nevertheless, few studies have examined collections in outsourcing libraries.

Within this context, this study investigates the difference between outsourcing libraries and "traditional" libraries managed directly by local governments (henceforth "direct management libraries"), with a focus on book collections. More specifically, we compared outsourcing and direct management libraries with regard to: (a) the characteristics of books, and (b) the number of books being borrowed. As for (a), the following eight types of characteristics were considered: (1) Nippon Decimal Classification (NDC) categories, (2) C-Code, (3) whether the book is listed in "*Shukan-Shinkan-Zenten-Annai* (*Weekly Guide on Newly Published Books*)" (henceforth *Weekly Guide*), (4) the book's evaluation score in the *Weekly Guide*, (5) whether the book is an assigned reading book as "*Kadaitosho* (assigned book for National Youth Book Report Contest)" (henceforth assignment books), (6) whether the review of the book appeared in newspapers (henceforth reviewed books), (7) whether the book is out of print, and (8) its price. We chose 10,000 books, which were published in 2013 as our sample books; and the holdings of 373 outsourcing libraries and 2,556 direct management libraries were investigated using "*Calil* (https://calil.jp/)." *Calil* is a free Web service that can perform cross-library searches concerning libraries in Japan. We also investigated the number of books being borrowed concerning our sample of 10,000 books over a certain period by using *Calil*.

Moreover, we classified libraries according to type, such as (a) whether they were main libraries or annexes, and (b) the type of municipality they served. We also classified outsourcing libraries (c) according to the form of administrator, such as a private enterprise or an NPO, and (d) according to the specific administrator, such as T Company and H Foundation. For each category, we examined the differences between outsourcing and direct management libraries.

RELATED STUDIES

Few studies have examined the collections of outsourcing libraries in Japan. In 2016, to examine whether controversial books were fairly held by public libraries, Ohba et al. (2016) investigated the numbers of collections of books on the subject of "the right to collective defense" in 5,003 Japanese libraries. Along with many other results, they showed that the tendencies of outsourcing and direct management libraries were almost the same with regard to holding such books. Ikezawa (2016) analyzed 8,343 books that Ebina City Library (an outsourcing library) planned to acquire with its renewal. He concluded that there were some biases on book subjects, finding that the proportions of books on cooking and travel were relatively high and no books on law, education, mathematics, or physics were planned to be acquired.

METHOD

In this section, we explain our method to select sample libraries and books, and the methods of comparison between outsourcing and direct management libraries.

Sample Libraries

We used 3,032 public libraries from which *Calil* can retrieve their collections as our sample libraries. We classified them as either outsourcing or direct management libraries based on the "*Report on Public Libraries Managed by the Designated Administrator System in 2015* (Japan Library Association (2015a))." That report includes a list of outsourcing libraries, which we identified as outsourcing libraries for our purposes. Those that were not on that list we identified as direct management libraries. This report also indicated when each library introduced outsourcing. We excluded (a) outsourcing libraries that were direct management libraries in 2013 and (b) direct management libraries that were outsourcing libraries in 2013, from our sample libraries, because we could not judge whether the acquisition was made by outsourcing or direct management libraries. In addition, we also excluded the libraries that did not hold any of our sample books (we will explain the sample books in the next subsection). The number of our sample outsourcing and direct management libraries was 373 and 2,556, respectively.

Furthermore, we classified the libraries as either main libraries or annexes, and according to the type of municipality served: (1) prefectural libraries, (2) ordinance-designated city libraries, (3) Tokyo special ward libraries, (4) a city other than ordinance-designated libraries (henceforth "general city libraries"), and (5) town and village libraries. The classification was based on "*Statistics on Libraries in Japan* (Japan Library Association (2015b))." We excluded from our sample for this type-wise analysis the libraries whose categories (i.e., main libraries or annexes and type of municipality) were not shown in the "*Statistics on Libraries in Japan.*" Due to this, the total numbers of samples shown in Table 1 were slightly different depending on the analysis.

In addition, we classified outsourcing libraries according to the corporate form of the administrator: (a) private enterprise, (b) NPO, (c) public corporation, or (d) other organization, using the "*Report on Public Libraries Managed by the Designated Administrator System in 2015* (Japan Library Association (2015a))." Next, we identified the top three predominant administrators (i.e., those managing the most libraries) using the "*Survey on the Introduction of the Designated Administrator System*" conducted by the Ministry of Internal Affairs and Communications (2012). Table 1 shows the total number of libraries in each category of our sample. The predominant administrators are also shown in Table 1.

Table 1. Number of Sample Libraries

		Outsourcing libraries	Direct management libraries
(All libraries)		373	2,556
Main vs. Annex	Main libraries	126	1,041
	Annexes	247	1,442
Types of municipality	Prefectural libraries	4	52
	Ordinance-designated city libraries	48	222
	Tokyo special ward libraries	92	122
	General city libraries	188	1,697
	Town and village libraries	41	390
Corporate forms of administrators	Private enterprises	289	
	NPOs	30	
	Public corporations	45	
	Other organizations	9	
Predominant administrators	T Company	101	
	V Company	17	
	H Foundation	11	

Sample Books

We used 10,000 books published in 2013 as our sample books. We selected the sample books in the following steps:

(I) We downloaded bibliographic records of books published in 2013 from the "*Japanese National Bibliography* (http://ndlopac.ndl.go.jp/F/?func=find-c-0&local_base=gu_nz)," which were provided by the National Diet Library (116,844 books).

(II) We excluded bibliographic records that did not have ISBN data, because *Calil* only allows us to search books by ISBN (93,169 bibliographic records were left).

(III) We randomly chose 10,000 bibliographic records from the 93,169 bibliographic records.

Concerning those 10,000 books, we investigated which ones were being held and which ones were being borrowed in our sample libraries using *Calil*, from April to July 2016.

In addition, we obtained data of characteristics concerning our sample books. As previously mentioned, the characteristics we considered were as follows: (1) NDC categories, (2) C-Code, (3) whether the book is listed in the *Weekly Guide*, (4) the book's evaluation score in the *Weekly Guide*, (5) whether the book is an assignment book, (6) whether the book is a reviewed book, (7) whether the book is out of print, and (8) its price. Table 2 shows how and when we obtained the data.

In the following, we explain NDC, C-Code, the *Weekly Guide*, and its evaluation system. NDC is the most popular library classification system in Japan. The classification code consists of three digits. We used first-level (i.e., first digit), second-level (i.e., first and second digits), and third-level (i.e., first, second and third digits) classification codes as book characteristics. For example, if 159 was assigned to a book as NDC categories, we used 1, 15, and 159. Incidentally, "1," "15," and "159" represent "Philosophy," "Ethics. Morals," and "Practical ethics," respectively.

C-Code is a classification code assigned by Japanese publishers for bookstores. C-code consists of four numbers: first digit represents target readers (such as "5: Books for women"), the second digit represents forms of book (such as "5: Dictionaries"), and the third and fifth digits represent book subjects (such as "10: philosophy").

The previously-mentioned *Weekly Guide* is a book catalogue used by almost all public libraries in Japan for book selection. The *Weekly Guide* is published by TRC Library Service Co. (henceforth TRC), which is a company that provides many services for libraries such as providing book logistics systems, the management of libraries based on the outsourcing system, and publishing the book catalogue. The *Weekly Guide* has a "stock books" section.

Table 2. Characteristics Analyzed

Characteristics		Values	Channel of acquisition	Acquisition date
NDC categories	First-level	0, 1, …, 8, 9	Japanese National Bibliography provided by national diet library (http://ndlopac.ndl.go.jp/F/?func=find-c-0&local_base=gu_nz)	08/16/15-08/18/15
	Second-level	00, 01, …, 98, 99		
	Third-level	000, 001, …, 998, 999		
C-Code	First digit (target readers)	0, 1, …, 8, 9	Books.or.jp (http://www.books.or.jp/)	05/04/16-05/05/16
	Second digit (forms)	0, 1, …, 8, 9	Hanmoto.com API	05/09/16
	Third and fifth digits (subject)	00, 01, …, 98, 99	Yodobashi.com (http://www.yodobashi.com/)	05/11/16-05/12/16
Whether it is listed in the Weekly Guide		yes or no	Electronic data of "*Weekly Guide on Newly Published Books*" provided by TRC	11/20/14
The evaluation score in the *Weekly Guide*		0, 1, 2, 3		
Whether it is an assignment book		yes or no	National Youth Book Report Contest: assigned reading book archives (http://www.j-sla.or.jp/contest/youngr/)	07/29/16
Whether it is a reviewed book		yes or no	Book review news (http://www.shohyonews.jp/)	08/08/16
Whether the book is out of print		yes or no	Hanmoto.com API	05/24/16
Price (Yen)		120 (minimum)～ 500,000 (maximum)	Japanese National Bibliography provided by national diet library	08/16/15-08/18/15

The books listed in this section have zero, one, two, or three stars as the evaluation from TRC.

Methods of comparison

In this section, we explain our methods of comparison between outsourcing and direct management libraries. As we mentioned in the preceding subsection, we used eight types of book characteristics. Concerning characteristics, apart from price, we calculated each library's holding rate (HR) for each characteristic. HR is defined as follows:

$$HR(\%) = \frac{N_{\text{char}}}{N_{\text{all}}} \times 100 \ (\%)$$

where N_{all} is the total number of our sample books held by the library, and N_{char} is the total number of our sample books that had the characteristic that were held by the library. Concerning NDC categories and C-Code, we calculated each category's HR for each library. Concerning the evaluation score in the *Weekly Guide*, we calculated each evaluation's HR (from zero stars to three stars). Concerning the other characteristics, N_{char} represents the total number of sample books that correspond to each characteristic (i.e., the books assigned "yes" in the column "Values" in Table 2) held by the library. For example, if a library (henceforth, A-library) had four sample books as shown in Table 3, HR for being listed in the *Weekly Guide* was 75% (3/4), and HRs for no star and one star were 50% (2/4) and 25% (1/4), respectively. Using NDC categories, the HR for books whose first-level classification were 1 (Philosophy) was 50% (2/4). We calculated the mean (average), median, maximum, minimum, and standard deviation (SD) of HRs of outsourcing and direct management libraries, and compared them.

Concerning price, we calculated each library's average price of books held by the library ($\bar{P}$), defined as follows:

$$\bar{P} = \frac{1}{N} \sum_{i=1}^{N} P_i$$

where N represents the total number of our sample books held by the library and P_i represents the price of i-th book. For example, $\bar{P}$ of A-library was 1,320 Yen (=(1400+2300+800+780)/4). We calculated the mean, median, maximum, minimum, and SD of $\bar{P}$ of outsourcing and direct management libraries, and compared them.

Finally, we explain the method on books being borrowed. We calculated each library's borrowing rate (BR) defined as follows:

$$BR(\%) = \frac{N_{\text{borrow}}}{H_{\text{all}}} \times 100 \ (\%)$$

where N_{all} represents the total number of our sample books held by the library and N_{borrow} represents the total number of sample books being borrowed in the library. For example, if two books in Table 3 were being borrowed, the BR of A-library was 50% (2/4). We calculated the mean, median, maximum, minimum, and SD of BR of outsourcing and direct management libraries, and compared them.

Table 3. Example of Books Held by a Library (A-Library)

ISBN	Title	NDC Categories	C-Code	*The Weekly Guide*		…	Out of print	Its price (Yen)
				Listed	The evaluation score			
978-4-905073-04-8	*Life Works Itself Out*	159	0095	yes	0 (no star)	…	yes	1,400
978-4-309-24629-1	*IseJingu and Japanese People*	175	0014	yes	1 (one star)	…	yes	2,300
978-4-533-09243-5	*Travel Guide Kumamoto, Aso, and Amakusa, Japan*	291	9426	yes	0 (no star)	…	no	800
978-4-04-728901-7	*World Encyclopedia of Funghi*	726	0076	no	–	…	yes	780

RESULTS

In this section, we first reveal the results of HRs of books concerning categories (1) to (8) that was mentioned in the Introduction, followed by the BRs.

NDC categories

Table 4 shows the NDC categories (up to the second level) for which significant differences were observed between the outsourcing and direct management libraries based on Welch's t test at 0.05 level. "(All libraries)" represents the results for all the sample libraries. The results for each type of library (as mentioned in the Introduction) are shown in the rows below "(All libraries)." OS and DM represent outsourcing and direct management libraries, respectively, and NDC categories of books whose HRs in outsourcing libraries were significantly higher than those in direct management libraries are shown in OS-row. If direct management libraries had significantly higher rates, then the category is shown in the DM-row. For example, Table 4 shows that outsourcing libraries had significantly higher rates for books on "General works" than direct management libraries. Numbers in parentheses represent classification codes. Concerning that categories for administrators (i.e., the corporate forms of the administrator and predominant administrators), we compared each category's HR with the HR of all the sample direct management libraries. If the type of outsourcing libraries had significantly higher rates than all direct management libraries, the category is shown in the OS-row, and if the type of outsourcing libraries had significantly lower rates than all direct management library, the category is shown in DM-row.

We will first explain the results for all libraries. Table 4 shows that outsourcing libraries had significantly higher rates than direct management libraries for 22 categories such as "General works" and "Books. Bibliography." On the other hand, direct management libraries had significantly higher rates for only four categories i.e., (1) "Literature," (2) "General collected essays," (3) "Domestic arts and sciences," and (4) "Japanese literature." Moreover, when observing third-level classification concerning these four categories, direct management libraries had significantly higher rates than direct outsourcing libraries for (1) "General miscellanies," (2) "Handicrafts," (3) "Fiction. Romance. Novel," and (4) "Essays. Prose." These results suggest that direct management libraries tend to hold more light reading material such as novels and essays than outsourcing libraries.

Similar tendencies were observed in annex libraries and ordinary city (a city that is not ordinance-designated) libraries. In these libraries, direct management libraries had significantly higher rates for "literature" and "Japanese literature." Similar tendencies were also observed in outsourcing libraries managed by private enterprises and T company (i.e., these libraries had significantly lower rates for "literature" and "Japanese literature" than all direct management libraries).

Table 4. NDC categories

(All libraries)	OS	General works(0), Social sciences(3), Natural sciences(4), Industry(6), General works(00), Books. Bibliography(02), Western philosophy(13), General history(20), Law(32), Economics(33), Education(37), Natural sciences(40), Mathematics(41), Earth sciences(45), Technology. Engineering(50), Architecture. Building(52), Mechanical engineering(53), Chemical technology(57), Commerce(67), Sports and physical training(78), German(84), French literature(95)
	DM	Literature(9), General collected essays(04), Domestic arts and sciences(59), Japanese literature(91)
Main libraries	OS	General works(00), Construction. Civil engineering(51), Sports and physical training(78)
	DM	General collected essays(04), General collections(08), Oriental thought(12), Ethics. Morals(15), Social sciences(30), Sculpture. Plastic arts(71), Engraving(73), Chinese literature(92)
Annexes	OS	General works(0), Social sciences(3), Natural sciences(4), Industry(6), Language(8), General works(00), Libraries. Library and information sciences(01), Books. Bibliography(02), General collections(08), Philosophy(10), Special treatises on philosophy(11), Western philosophy(13), Christianity(19), General history(20), General history of Japan(21), General history of Europe(23), Political science(31), Law(32), Economics(33), Public finance(34), Statistics(35), Education(37), Natural sciences(40), Mathematics(41), Earth sciences(45), Technology. Engineering(50), Architecture. Building(52), Mechanical engineering(53), Electrical engineering(54), Chemical technology(57), Commerce(67), Sports and physical training(78), Japanese(81), German(84), French literature(95), Russian literature(98)
	DM	Literature(9), Domestic arts and sciences(59), Japanese literature(91)
Prefectural libraries	OS	
	DM	General history(20), Italian(87)
Ordinance-designated city libraries	OS	Libraries. Library and information sciences(01), Oriental thought(12), Religion(16), Education(37), Customs, folklore and ethnology(38), Natural sciences(40), Mathematics(41), Zoology(48), Technology. Engineering(50), Commerce(67), Literature(90), Literatures of other languages(99)
	DM	History(2), General geography. Description and travel(29), Social sciences(30), Political science(31), Statistics(35), Physics(42), Construction. Civil engineering(51), Forestry(65)
Tokyo special ward libraries	OS	Industry(6), Language(8), General collections(08), Earth sciences(45), Agriculture(61), Animal husbandry(64), Photography and photographs(74), Japanese(81), Italian literature(97)
	DM	History(2), Oriental thought(12), Spanish literature(96), Russian literature(98)
General city libraries	OS	Social sciences(3), General works(00), Books. Bibliography(02), Law(32), Physics(42), Construction. Civil engineering(51), Mechanical engineering(53), Sports and physical training(78)
	DM	Literature(9), General collected essays(04), Domestic arts and sciences(59), Music(76), Japanese literature(91)
Town and village libraries	OS	History(2), Technology(5), General history(20), General geography. Description and travel(29), Sports and physical training(78)
	DM	Ethics. Morals(15), Statistics(35), Sculpture. Plastic arts(71)
Private enterprises	OS	General works(0), History(2), Social sciences(3), Natural sciences(4), Industry(6), Language(8), General works(00), Books. Bibliography(02), Philosophy(10), Western philosophy(13), Christianity(19), General history(20), General history of Japan(21), Political science(31), Law(32), Economics(33), Public finance(34), Education(37), Natural sciences(40), Mathematics(41), Earth sciences(45), Biology(46), Technology. Engineering(50), Construction. Civil engineering(51), Architecture. Building(52), Mechanical engineering(53), Chemical technology(57), Animal husbandry(64), Commerce(67), Theater(77), Sports and physical training(78), Japanese(81), German(84), French literature(95), Spanish literature(96)
	DM	Literature(9), General collected essays(04), Domestic arts and sciences(59), Painting. Pictorial arts(72), Japanese literature(91)
NPOs	OS	
	DM	General societies(06), General collections(08), Oriental thought(12), Western philosophy(13), Technology. Engineering(50), Communication services(69), Chinese(82), Chinese literature(92)
Public corporations	OS	
	DM	Technology(5), General societies(06), Philosophy(10), General history of Japan(21), General biography(28), Astronomy. Space sciences(44), Biology(46), Manufactures(58), Forestry(65), Engraving(73), Theater(77), Japanese(81), Chinese(82), Chinese literature(92)
Other organizations	OS	
	DM	General encyclopedias(03), General societies(06), Journalism. Newspapers(07), General collections(08), Oriental thought(12), General history of Europe(23), General geography. Description and travel(29), Statistics(35), Biology(46), Maritime engineering(55), Metal and mining engineering(56), Forestry(65), Communication services(69), Engraving(73), Industrial arts(75), Chinese(82), German(84), Italian(87), French literature(95), Spanish literature(96)
T Company	OS	General works(0), History(2), Social sciences(3), Industry(6), General works(00), Books. Bibliography(02), Law(32), Economics(33), Customs, folklore and ethnology(38), Mathematics(41), Earth sciences(45), Technology. Engineering(50), Construction. Civil engineering(51), Mechanical engineering(53), The arts. Fine arts(70), Sports and physical training(78), French literature(95), Spanish literature(96)
	DM	Literature(9), Japanese literature(91)
V Company	OS	Social sciences(3), General geography. Description and travel(29), Political science(31), Economics(33), Earth sciences(45), Chemical technology(57), Sports and physical training(78)
	DM	The arts(7), General encyclopedias(03), General societies(06), General collections(08), Religion(16), Maritime engineering(55), Forestry(65), Painting. Pictorial arts(72), Chinese(82), English(83), Italian(87), Japanese literature(91)
H Foundation	OS	Industry(6), Oriental thought(12), Education(37), Natural sciences(40), Agriculture(61), Sports and physical training(78), German(84)
	DM	Literature(9), General societies(06), General collections(08), Philosophy(10), Statistics(35), Astronomy. Space sciences(44), Construction. Civil engineering(51), Manufactures(58), Fishing industry. Fisheries(66), Chinese(82), Japanese literature(91), Spanish literature(96), Italian literature(97)

C-Code

Tables 5 and 6 show the results on C-Code. Results concerning the first and second digit (target readers and formats) are shown in Table 5 and results concerning the third and fourth digit (subjects) are shown in Table 6 (Incidentally, *bunko* and *shinsho* under formats represent the size of books. Both represent pocket-sized paperbacks, while *bunko* is smaller than *sinsho* (approximately 105×148mm and 103×182mm, respectively). *Tankobon* means monograph and is generally hardcover).

Interestingly, the results suggest that outsourcing libraries were more prudent in holding comics depending on library type. Table 5 shows that some types of outsourcing libraries had significantly lower rates concerning comics than direct management libraries (i.e., prefectural, Tokyo special word, and town and village libraries, libraries managed by private enterprises, and those managed by T company).

In addition, for overall results of C-Code, outsourcing libraries had significantly higher rates for "Dictionaries" formats, "General encyclopedias," and "Economics. Public finance.

Table 5. C-Code (Target readers and Formats)

		Target readers	Formats
(All libraries)	OS	Books on culture(1), Practical books(2), Professional and technical books(3)	Tankobon(0), Dictionaries(5), Magnetic media(8)
	DM		Mooks. Diaries. Notebooks(4)
Main libraries	OS	Practical books(2)	Tankobon(0)
	DM	Books for general readers(0)	Bunko(1)
Annexes	OS	Books on culture(1), Practical books(2), Professional and technical books(3)	Sinsho(2), Dictionaries(5), Illustrated reference books(6), Magnetic media(8)
	DM		Mooks. Diaries. Notebooks(4), Picture books(7)
Prefectural libraries	OS		
	DM		Comics(9)
Ordinance-designated city libraries	OS	Books for children(8)	Picture books(7)
	DM	Professional and technical books(3)	Mooks. Diaries. Notebooks(4), Magnetic media(8)
Tokyo special ward libraries	OS	Textbooks for elementary or junior high school students(6)	Tankobon(0), Dictionaries(5), Illustrated reference books(6), Magnetic media(8)
	DM	Magazines(9)	Bunko(1), Comics(9)
General city libraries	OS	Practical books(2), Professional and technical books(3)	Tankobon(0), Dictionaries(5), Illustrated reference books(6)
	DM	Books for general readers(0)	Bunko(1)
Town and village libraries	OS	Practical books(2), Professional and technical books(3)	Tankobon(0)
	DM		Bunko(1), Comics(9)
Private enterprises	OS	Books on culture(1), Practical books(2), Professional and technical books(3)	Dictionaries(5), Illustrated reference books(6), Magnetic media(8)
	DM	Magazines(9)	Mooks. Diaries. Notebooks(4), Comics(9)
NPOs	OS	Practical books(2)	Tankobon(0)
	DM	Books on culture(1)	Bunko(1)
Public corporations	OS		Dictionaries(5)
	DM	Books for women(5)	Bunko(1), Mooks. Diaries. Notebooks(4)
Other organizations	OS		
	DM	Textbooks for elementary or junior high school students(6), Textbooks for high school students(7)	Bunko(1), Magnetic media(8)
T Company	OS	Books on culture(1), Practical books(2)	Tankobon(0), Dictionaries(5)
	DM	Textbooks for high school students(7), Magazines(9)	Comics(9)
V Company	OS	Books for general readers(0), Books on culture(1)	Bunko(1), Sinsho(2)
	DM	Books for children(8)	Tankobon(0), Picture books(7), Comics(9)
H Foundation	OS		Dictionaries(5)
	DM		Bunko(1), Mooks. Diaries. Notebooks(4)

Statistics" subjects. These results suggest that outsourcing libraries tend to hold reference books more than direct management libraries. Similar tendencies were observed in other types of libraries such as annex libraries and libraries managed by private enterprises.

Table 6. C-Code (Subjects)

(All libraries)	OS	General encyclopedias(1), Religion(14), General history of Japan(21), General history of foreign countries(22), Political science(31), Law(32), Economics. Public finance. Statistics(33), Management(34), Natural sciences(40), Mathematics(41), Earth sciences(44), Medical sciences(47), Technology. Engineering(50), Communication engineering(55), The arts(70), Photography. Industrial arts(72), Music(73), Sports and physical training(75), English(82), German(84), Each language(87), Other foreign literatures(98)
	DM	Other Engineering(58), Japanese literature: Fiction. Romance. Novel(93)
Main libraries	OS	Painting. Sculpture(71), Sports and physical training(75)
	DM	Information sciences(4), Chemistry(43), Exploitation. Metallurgy(57), Language(80)
Annexes	OS	General works(0), General encyclopedias(1), Psychology(11), Religion(14), Christianity(16), General history(20), General history of Japan(21), General history of foreign countries(22), Political science(31), Law(32), Economics. Public finance. Statistics(33), Management(34), Society(36), Natural sciences(40), Mathematics(41), Earth sciences(44), Medical sciences(47), Technology. Engineering(50), Architecture. Building(52), Communication engineering(55), The arts(70), Photography. Industrial arts(72), Music(73), Sports and physical training(75), Japanese(81), English(82), German(84), Each language(87), Other foreign literatures(98)
	DM	Other Engineering(58), Household(77), Japanese literature: Fiction. Romance. Novel(93)
Prefectural libraries	OS	English(82)
	DM	
Ordinance-designated city libraries	OS	General encyclopedias(1), Ethics(12), Religion(14), Technology. Engineering(50), Literature(90), Other foreign literatures(98)
	DM	General history(20), Travel(26), Physics(42), Medical sciences(47), Civil engineering(51), Mechanical engineering(53), Fishing industry. Fisheries(62), Life(78), Each language(87)
Tokyo special ward libraries	OS	General encyclopedias(1), Natural sciences(40), Fishing industry. Fisheries(62), The arts(70), Painting. Sculpture(71), Photography. Industrial arts(72), Japanese(81), Other foreign literatures(98)
	DM	Comics. Graphic novels(79)
General city libraries	OS	Law(32), Education(37), Natural sciences(40), Earth sciences(44), Medical sciences(47), Sports and physical training(75), Other foreign literatures(98)
	DM	Ethics(12), Travel(26), Exploitation. Metallurgy(57), Language(80), Japanese literature: Fiction. Romance. Novel(93), Japanese literature: Essays. Prose. Other literatures(95)
Town and village libraries	OS	Economics. Public finance. Statistics(33), Education(37), Medical sciences(47), Sports and physical training(75)
	DM	Other Engineering(58), Comics. Graphic novels(79), Japanese literature: Fiction. Romance. Novel(93)
Private enterprises	OS	General encyclopedias(1), Religion(14), General history(20), General history of Japan(21), General history of foreign countries(22), Political science(31), Law(32), Economics. Public finance. Statistics(33), Management(34), Society(36), Natural sciences(40), Mathematics(41), Earth sciences(44), Medical sciences(47), Technology. Engineering(50), Architecture. Building(52), Communication engineering(55), The arts(70), Photography. Industrial arts(72), Music(73), Sports and physical training(75), Japanese(81), English(82), German(84), Each language(87), Other foreign literatures(98)
	DM	General biography. Family history(23), Other Engineering(58), Agriculture. Forestry(61), Household(77), Life(78), Comics. Graphic novels(79), Japanese literature: Fiction. Romance. Novel(93)
NPOs	OS	
	DM	Christianity(16), Electrical engineering(54), Maritime engineering(56), Exploitation. Metallurgy(57), Commerce(63), Language(80), French(85)
Public corporations	OS	General encyclopedias(1)
	DM	Philosophy(10), General history(20), General history of Japan(21), Civil engineering(51), Industry(60), Theater(74), Accomplishments and amusements(76), Language(80), French(85), Literature(90)
Other organizations	OS	
	DM	General works(0), Yearbooks. Magazines(2), General geography(25), Travel(26), Civil engineering(51), Mechanical engineering(53), Maritime engineering(56), Exploitation. Metallurgy(57), Language(80), German(84), French(85), Other foreign literatures(98)
T Company	OS	Religion(14), General history(20), General history of foreign countries(22), Political science(31), Law(32), Society(36), Natural sciences(40), Mathematics(41), Earth sciences(44), Communication engineering(55), The arts(70), Music(73), Sports and physical training(75), Other foreign literatures(98)
	DM	Maritime engineering(56), Life(78), Comics. Graphic novels(79), Japanese literature: Fiction. Romance. Novel(93)
V Company	OS	General history of foreign countries(22), General geography(25), Travel(26), Economics. Public finance. Statistics(33), Sports and physical training(75), English(82)
	DM	Maritime engineering(56), Exploitation. Metallurgy(57), Other Engineering(58), Agriculture. Forestry(61), Comics. Graphic novels(79), French(85), Japanese literature: Fiction. Romance. Novel(93)
H Foundation	OS	General encyclopedias(1), Psychology(11), Ethics(12), Yearbooks. Magazines(2), General biography. Family history(23), Technology. Engineering(50), Transportation services. Communication services(65), German(84)
	DM	Civil engineering(51), Industry(60), Fishing industry. Fisheries(62), Painting. Sculpture(71), Life(78), French(85), Japanese literature: poetry(92), Japanese literature: Fiction. Romance. Novel(93)

HRs concerning the *Weekly Guide*

Tables 7 and 8 show the results on books being listed in the *Weekly Guide* and the evaluation score in the *Weekly Guide*, respectively. These tables show the mean, median, maximum, minimum, and SD of the HRs concerning the *Weekly Guide*. The symbol "n" represents the number of libraries. "(All libraries)" represents the results for all the sample libraries. The "*" and "**" in the "Mean" columns represent significant differences at the 0.05 and 0.01 levels, respectively, observed using Welch's t test. The results for each type of library are shown in the rows below "(All libraries)," only when a significant difference was observed. For example, Table 7 shows that means for outsourcing and direct management libraries were both 96.6% and there was no significant difference between the two. The mean of outsourcing libraries managed by private enterprises was 97.5% and it was significantly higher than that of all direct management libraries (96.6%) at the 0.01 level.

We will first explain the results for books being listed the *Weekly Guide*. As previously mentioned, the means of HRs of outsourcing and direct management libraries were the same and significant differences were not observed. There were significant differences between outsourcing and direct management libraries in some types of libraries, such as Tokyo special ward libraries and those managed by private enterprises; however, all of their means of HRs were very high (more than 96%). These results suggest that many libraries hold many books listed in the *Weekly Guide*.

Next, we explain the results for evaluation in the *Weekly Guide*. We can see in Table 8 that the means of HRs of books that were given no star, one star, two stars, and three stars in the *Weekly Guide* concerning outsourcing libraries (21.6%, 10.6%, 9.7%, and 9.4%, respectively) were higher than those of direct management libraries (21.4%, 9.8%, 9.2%, and 9.0%, respectively), and there were significant differences between those given one star and two stars. These results suggest that outsourcing libraries tend to hold books listed in the stock

Table 7. HRs for Books Being Listed in the *Weekly Guide* (%)

	Outsourcing libraries						Direct management libraries					
	n	Mean	Median	Maximum	Minimum	SD	n	Mean	Median	Maximum	Minimum	SD
(All libraries)	373	96.6	96.9	100.0	4.9	5.0	2,556	96.6	97.0	100.0	0.0	3.3
Main libraries	126	96.7 *	96.8	100.0	92.6	1.5	1,041	96.4	96.8	100.0	72.9	2.1
Tokyo special ward libraries	92	97.0 **	96.9	99.2	94.3	0.9	122	96.4	96.4	100.0	90.8	1.3
General city libraries	188	96.9 *	96.9	100.0	87.5	1.7	1,697	96.6	97.0	100.0	0.0	3.7
Private enterprises	289	96.9 **	96.9	100.0	87.5	1.4	—	—	—	—	—	—
V Company	17	97.5 **	97.5	99.2	96.2	0.8	—	—	—	—	—	—

Table 8. HRs concerning the Evaluation Score in the *Weekly Guide* (%)

		Outsourcing libraries						Direct management libraries					
		n	Mean	Median	Maximum	Minimum	SD	n	Mean	Median	Maximum	Minimum	SD
No stars	(All libraries)	373	21.6	21.5	45.5	0.6	5.4	2,556	21.4	21.3	100.0	0.0	6.7
	Other organizations	9	25.3 *	25.6	30.6	16.1	4.7	—	—	—	—	—	—
One star (☆)	(All libraries)	373	10.6 **	10.6	33.3	0.0	3.4	2,556	9.8	9.7	50.0	0.0	3.6
	Annexes	247	11.1 **	11.0	33.3	0.0	3.6	1,442	9.8	9.6	50.0	0.0	3.9
	Ordinance-designated city libraries	48	10.7 *	10.6	22.2	0.0	3.4	222	9.5	9.5	19.2	2.4	2.6
	Tokyo special ward libraries	92	11.4 **	11.8	16.5	4.7	2.3	122	10.3	10.3	19.9	5.3	2.1
	General city libraries	188	10.5 *	10.1	33.3	2.5	3.7	1,697	9.8	9.7	50.0	0.0	3.7
	Private enterprises	289	10.7 **	10.8	25.0	2.6	2.9	—	—	—	—	—	—
	T Company	101	10.9 **	10.8	20.2	3.4	2.8	—	—	—	—	—	—
Two stars (☆☆)	(All libraries)	373	9.7 **	9.7	28.6	0.0	3.1	2,556	9.2	9.2	50.0	0.0	3.6
	Annexes	247	9.7 **	9.5	28.6	0.0	3.3	1,442	8.8	8.6	31.3	0.0	3.6
	Ordinance-designated city libraries	48	9.6 *	9.5	16.3	0.3	2.6	222	8.6	8.5	18.8	2.0	2.4
	Tokyo special ward libraries	92	9.7 **	9.7	15.9	5.5	2.1	122	8.6	8.5	13.5	4.5	1.9
	Private enterprises	289	10.0 **	9.8	28.6	0.0	2.9	—	—	—	—	—	—
	T Company	101	10.6 **	10.4	28.6	4.2	3.3	—	—	—	—	—	—
Three stars (☆☆☆)	(All libraries)	373	9.4	9.2	18.8	0.0	3.2	2,556	9.0	8.7	66.7	0.0	4.1
	Tokyo special ward libraries	92	8.4 **	8.5	16.1	3.9	2.0	122	7.4	7.4	13.3	2.9	2.2
	General city libraries	188	10.0 **	9.9	18.4	0.0	3.4	1,697	9.1	8.9	66.7	0.0	4.2
	Private enterprises	289	9.5 *	9.2	18.8	0.0	2.9	—	—	—	—	—	—
	T Company	101	10.2 **	10.0	18.8	4.4	2.8	—	—	—	—	—	—

books section (which we mentioned in the Sample Books Section) and are paying attention to TRC's evaluation scores. Similar tendencies were observed in other types of libraries such as libraries managed by private enterprises. In particular, libraries managed by T company tend to conform to such tendencies.

HRs concerning assignment books

Table 9 shows the HRs concerning assignment books. The mean of the HRs of direct management libraries (0.81%) was significantly higher than that of outsourcing libraries (0.58%). This result suggests that direct management libraries tend to hold more assignment books than outsourcing libraries. Similar tendencies were observed in other types of libraries such as annex libraries and libraries managed by private enterprises.

HRs concerning reviewed books

Due to the limitation of space, we omitted the table concerning reviewed books. The means of HRs of outsourcing libraries and that of direct management libraries were almost the same (5.4% and 5.5%, respectively) and there was no significant difference concerning these books.

HRs concerning out of print books

We also omitted table concerning books being in print. The means of HRs of outsourcing and direct management libraries were almost the same (86.0% and 85.7%, respectively) and no statistically significant difference was observed.

Average Price

Table 10 shows the HRs concerning price. The mean of the average price of outsourcing libraries (1,504 Yen) was higher than that of direct management libraries (1,486 Yen), however there was no significant difference.

BRs (Rates of books being borrowed)

Table 11 shows the borrowing rates. The mean of the borrowing rates of outsourcing libraries (19.3%) was significantly higher than that of direct management libraries (16.4%). This result suggests that books in the outsourcing libraries tend to be borrowed more than direct management libraries. Similar tendencies were observed in other types of libraries such as annex libraries and libraries managed by private enterprises.

Table 9. HRs for Assignment Books (%)

| | Outsourcing libraries | | | | | | Direct management libraries | | | | | |
	n	Mean	Median	Maximum	Minimum	SD	n	Mean	Median	Maximum	Minimum	SD
(All libraries)	373	0.58	0.44	6.06	0.00	0.65	2,556	0.81 **	0.48	50.00	0.00	1.54
Annexes	247	0.63	0.48	6.06	0.00	0.74	1,442	0.93 **	0.55	20.00	0.00	1.38
General city libraries	188	0.63	0.49	5.88	0.00	0.72	1,697	0.80 **	0.47	20.00	0.00	1.23
Private enterprises	289	0.55	0.43	5.88	0.00	0.59	—	— **	—	—	—	—
Public corporations	45	0.59	0.50	2.78	0.00	0.59	—	— *	—	—	—	—
T Company	101	0.53	0.41	3.45	0.00	0.44	—	— **	—	—	—	—
V Company	17	0.48	0.41	1.58	0.00	0.33	—	— **	—	—	—	—
H Foundation	11	0.53	0.58	1.20	0.00	0.31	—	— *	—	—	—	—

CONCLUSIONS

While many argue whether public libraries should introduce the outsourcing system, few studies have examined or compared the services actually provided by outsourcing and direct management libraries. Within this context, we investigated the difference between outsourcing and direct management libraries, with a focus on book collections. We compared outsourcing and direct management libraries with regard to: (a) the characteristics of books, and (b) the number of books being borrowed. The results showed that direct management libraries tend to hold more novels than outsourcing libraries, whereas outsourcing libraries tend to hold more reference books than direct management libraries. It was also found that the rates of books being borrowed in outsourcing libraries were higher than that of direct management libraries.

In the future, we aim to examine books that have other characteristics and examine the cause of the differences between outsourcing and direct management libraries. Furthermore, we hope to focus not only on collections, but also on other library services, and to clarify the impact of the switch to outsourcing on Japanese libraries.

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Table 10. Average Price (Yen)

	Outsourcing libraries						Direct management libraries					
	n	Mean	Median	Maximum	Minimum	SD	n	Mean	Median	Maximum	Minimum	SD
(All libraries)	373	1,504	1,474	2,973	600	219	2,556	1,486	1,445	5,064	813	283
Annexes	247	1,458 **	1,442	2,392	600	176	1,442	1,399	1,380	5,064	865	229
General city libraries	188	1,482 *	1,470	2,059	1,075	162	1,697	1,454	1,439	2,709	813	196
Town and village libraries	41	1,499 *	1,499	1,700	1,269	103	390	1,461	1,456	2,500	1,002	151
T Company	101	1,537 **	1,505	1,930	1,199	151	—	—	—	—	—	—

Table 11. BRs (Rates of Books Being Borrowed) (%)

	Outsourcing libraries						Direct management libraries					
	n	Mean	Median	Maximum	Minimum	SD	n	Mean	Median	Maximum	Minimum	SD
(All libraries)	373	19.3 **	18.9	90.0	0.0	9.9	2,556	16.4	15.0	100.0	0.0	10.4
Annexes	247	20.6 **	20.6	90.0	0.0	10.6	1,442	17.1	15.4	100.0	0.0	11.5
Town and village libraries	41	13.4 *	12.4	28.5	1.7	7.5	390	10.9	10.0	99.3	0.0	7.7
Private enterprises	289	19.5 **	19.5	53.1	0.0	8.8	—	—	—	—	—	—
T Company	101	18.6 *	18.7	44.8	0.0	8.5	—	—	—	—	—	—
V Company	17	21.5 **	21.2	29.9	11.5	5.1	—	—	—	—	—	—