

The Effect of Mass Purchase on Document Supply Service at South Korean Medical Libraries

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The appearance of KESLI (Korea Electronic Site License Initiative), an electronic journals consortium, has allowed South Korean medical libraries to expand the availability of foreign academic journals dramatically. The growth in subscription journals has had a considerable impact on various library services, especially document supply service (DSS). Many studies have already reported that DSS has decreased as a result of electronic journal bundles provided by consortia, but this study shows the matter in a new light. The author performed an analysis to verify the direction that DSS has moved in the past five years at South Korean medical libraries, especially among KMLA (Korean Medical Library As-

sociation) members. Even though consortial purchasing has become the general practice, results show that DSS for 2006 was approximately 11% higher than for 2002. But we have to take note of the findings that DSS in these libraries has not increased from 2004, and has even decreased. In particular, DSS for 2006 decreased 43% as the volume peaked in 2003. Mass purchase by the consortium may be playing a great role in bringing about the decline in DSS. As mass purchase allows users to access not only current issues but also back issues anytime and anywhere, users can easily get needed articles that in the past could only be accessed by requesting copies from other libraries.

Introduction

The expansion of electronic journals has had a dramatic impact on publishers, users and libraries. Supplying electronic journals through consortia has become general practice in the last ten years. The impact of this has been observed in many library collections, which have quickly grown several times larger because consortial purchasing comes in bundles.

Users usually prefer electronic academic journals. Users also enjoy easy access, and they may compromise quality in favour of speed and convenience. Not only has the increase in the volume of available electronic journals reduced the number of unavailable articles, but also users have lost their patience with receiving DSS (Document Supply Service) articles that take a long time to

arrive. Thus, DSS statistics cannot help being in decline.

Many studies have already reported changes in DSS volume, especially its decline in local libraries after the appearance of electronic journals and consortial purchasing. Shrinking DSS has been described respectively at local libraries in England (Robertson 2003), USA (Yue and Syring 2004), Spain (Echeverria and Barredo 2005), France (Echeverria and Barredo 2005) and Iceland (Hlynsdottir and Gylfadottir 2004; Gylfadottir and Hlynsdottir 2006).

But some researchers feel that DSS may not decrease. Mark and Knakkegaard (2004) predicted that DSS will not show a downward tendency, but will remain constant in spite of general expectations. Their reasoning is as follows: users now access bibliographical information too comprehen-

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sive for the local library to provide full texts to them. After searching bibliographic information, users are more enthusiastic for full texts through their local collection or DSS.

José and Pacios (2005) revealed that in the health science library at the Mostoles Hospital in Spain, DSS has not decreased. They observed DSS has undergone notable changes over the last five years, in which DSS decreased but later recovered. Mass purchases include a large number of titles, but many of these were not in the library's core collection, so library users needed to acquire these titles separately. It is likely that users will require DSS still as mass purchases represent a loss of freedom in title selection and often make library collections homogeneous as many libraries choose, for economic reasons, the same packages of electronic journals.

After referring to former studies, this paper analyzed how the prevalence of electronic academic journals and consortial purchasing via KESLI (Korea Electronic Site License Initiative), has had an impact on library services, especially on DSS. In order to understand the influence on DSS, the author gathered purchase conditions and electronic academic journal subscription statistics from the KMLA (The Korean Medical Library Association) member libraries.

Methodology

This paper focused on understanding the recent transition of DSS in South Korean medical libraries. Generally, DSS volume is influenced by the scale of local library collections, but it may be true that it is affected more by the size of the core collection.

Since the KESLI project was initiated in 2000, mass purchase has been diffused in medical libraries as well as in academic libraries. As medical libraries' users rely heavily on academic journals for their research activities, the rapid increase in journal subscriptions through consortial purchasing has affected various library services. As a result, it could be predicted that DSS volumes in Korean medical libraries would change considerably after KESLI.

This study collected and analyzed DSS data in KMLA libraries. There were two reasons for choosing this specific case. First, most South Korean medical libraries are members of KMLA, so

we can observe the general trends in DSS in South Korean medical libraries through this analysis without analyzing all medical libraries; second, KMLA is long established and has a great deal of DSS usage statistics to help interpret this data.

This investigation has analyzed the changes happening each year by compiling DSS data over the past five years. In particular, the study observed whether DSS volumes were different based on whether or not the libraries chose to engage in mass purchasing. Also, DSS volumes were analyzed depending on library types, classified by parent body such as medical universities, medical institutes, pharmaceutical companies and hospitals.

KMLA

The mission of the KMLA is to provide medical staff with the information they require to provide quality medical care, teaching and research tasks. KMLA originated after four major medical university libraries exchanged catalogues of their journal subscriptions through interlibrary cooperation in 1967. In the following year, KMLA held a general meeting. Over the next 40 years, the number of KMLA members increased steadily. Its numbers rose to 173 in 2006.

KMLA usually has general meetings, symposia and workshops regularly to improve the level of services and specialty of medical librarians. KMLA published medical journal union catalogues in print versions from 1967 to 1997. It has also supplied online versions since 1998.

In 2000, MEDLIS, a Web-based interlibrary loan platform system, was developed by KMLA. After MEDLIS appeared, DSS became speedier and more accurate than in the past, whilst at the same time the users' efforts to request DSS were reduced greatly. Thus, KMLA member libraries have applied DSS via the Internet and sent copies to other libraries via fax or mail. The accounts of copies and postage costs have been balanced monthly. Also, KMLA has provided a DSS with the National Library of Medicine in the USA and the Japan Medical Library Association.

In 2006, the KMLA Web site showed the status of its 173 member libraries, classified by type, statistics of users, and total of academic journals as shown in Table 1. Hospital libraries account for 92 members (53%) of the total KMLA libraries.

Table 1: Status of KMLA libraries

Medical Library Type	Library Numbers (Percent)	Average Journal Numbers	Average user numbers		
			FTE	Students	Total
Hospitals	92(53%)	4,263	712	79	791
Universities	54(31%)	6,407	1,101	2,550	3,651
Institutions	16(9%)	4,316	276	100	376
Pharmacies	10(6%)	2,240	95	0	95
Others	1(1%)	257	59,000	0	59,000

Medical university libraries account for 54 (31%). The remaining 16% of members consists of 27 institutes, pharmaceutical companies and associations.

Medical university libraries have a lot of academic journals. They subscribed to 6,407 titles on average. Institutions have 4,316 titles on average, and hospital libraries have 4,263. Pharmaceutical company libraries held 2,240 journals on average.

The South Korean medical libraries have spent most of their budgets on subscribing to academic journals published in other countries. C. Park (2003) states that South Korean medical libraries have spent 80% or more of their budgets on academic journals; 80% of users' demands was for articles from academic journals. After the advent of the digital era, South Korean libraries have expended most of their collection allocations on academic electronic journals.

With the exception of KMA (Korean Medical Association), users of medical university libraries averaged 3,651, so they were the largest group. Hospital libraries were ranked the next with 791 users on average.

KESLI

KESLI has operated under the National Digital Science Library (NDSL) project. The purpose of NDSL has been to build a national digital library providing a comprehensive portal for foreign scientific information. Since 2000, KESLI has played an important role in solving the „serials crisis“, which is characterized by large price increases and lost buying power in the area of scientific journals due to little real competition.

In general, the goal of consortial purchasing is to be more effective, thereby saving money on some

resources in order to expend it on others. Also, KESLI gains benefits manifested by the intensive use of electronic journal titles that could not be accessed through paper subscriptions for many decades. Thus, the consortium has expanded the availability of foreign scientific journals more dramatically than before.

In 2000, 160 libraries from academic, research, medical, and corporate libraries joined KESLI (<http://www.kesli.or.kr>). By 2006, the total number of KESLI consortium members amounted to 317 institutions, composed of 144 academic libraries (45 %), 62 research libraries (20 %), 52 corporate libraries (16 %), 47 medical libraries (15 %), and 12 public libraries (4 %).

In 2000, six major publishers participated in KESLI, but participating publishers had grown to 76 by 2006. KESLI proposed 2,102 scientific journals in 2000, but these numbers increased to 13,179 by the end of 2006. Many major publishers were willing to provide scientific journals for their customers, so that subscriptions increased almost six fold. That means the number of scientific journals has increased on average about 20% per year. According to J. Park (2003), after launching KESLI, South Korean academic libraries were able to provide their users with about seven times as many scientific journals as before.

Figure 1 shows the relationship of the growth of KESLI members, publisher partners and available titles during 2000–2006.

Mass purchase of KMLA members

By the end of 2006, 173 KMLA member libraries subscribed to an average of 361 print journals and 3,137 electronic ones. Thus, their electronic journals were nine times as many as their print

Figure 1: Growth of KESLI, 2000-2006.

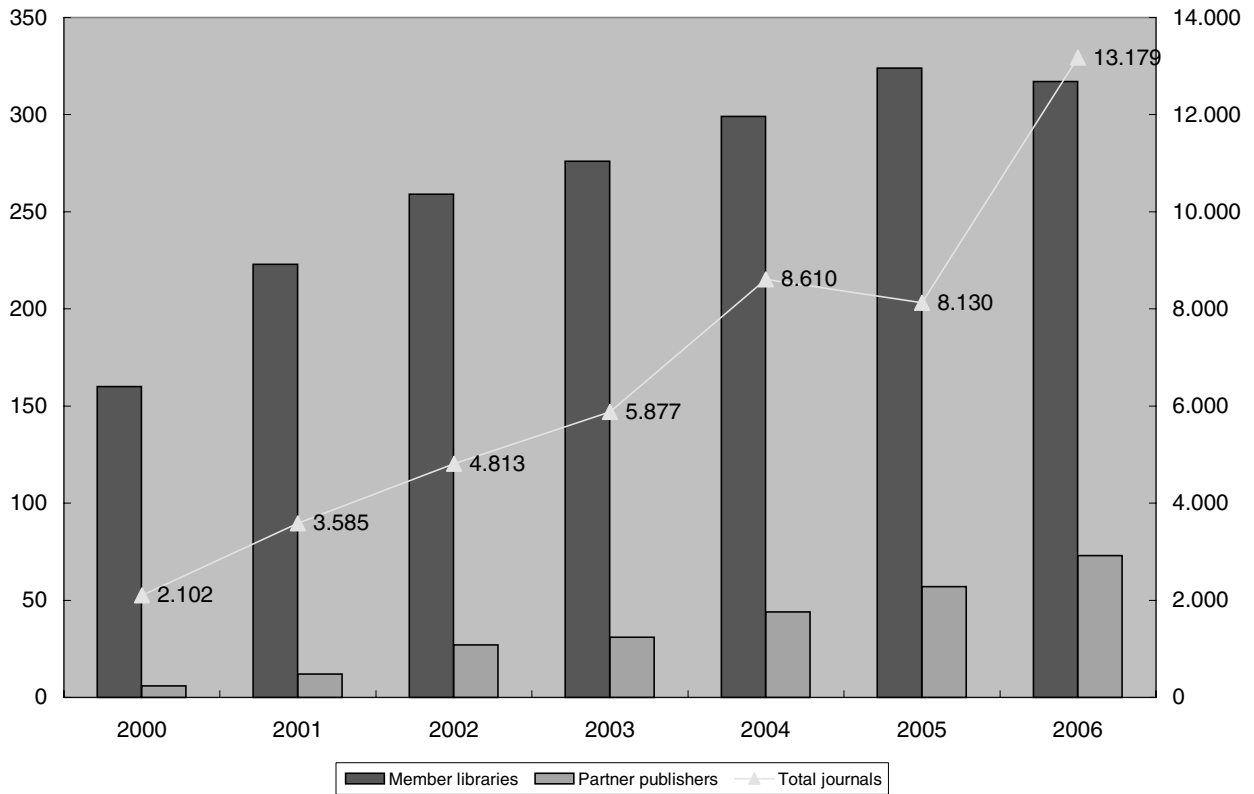


Figure 2: Total number of DSS requests, 2002-2006.

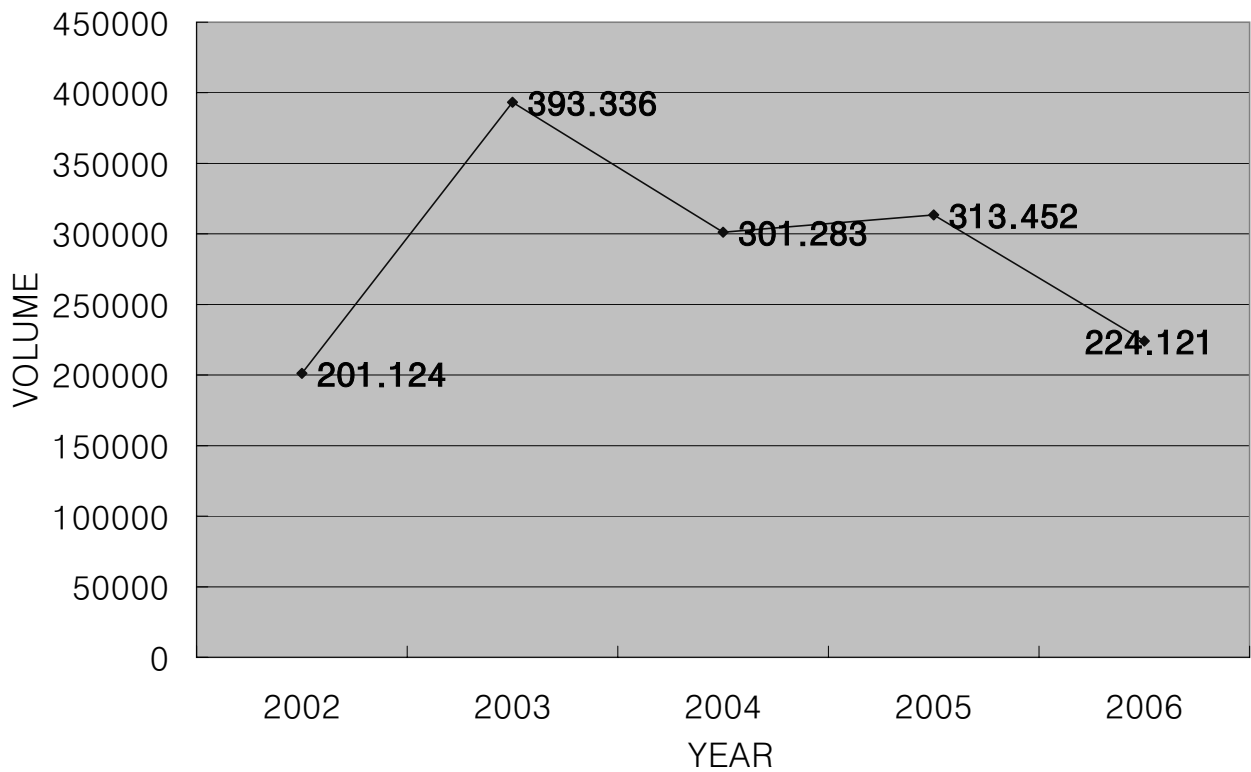
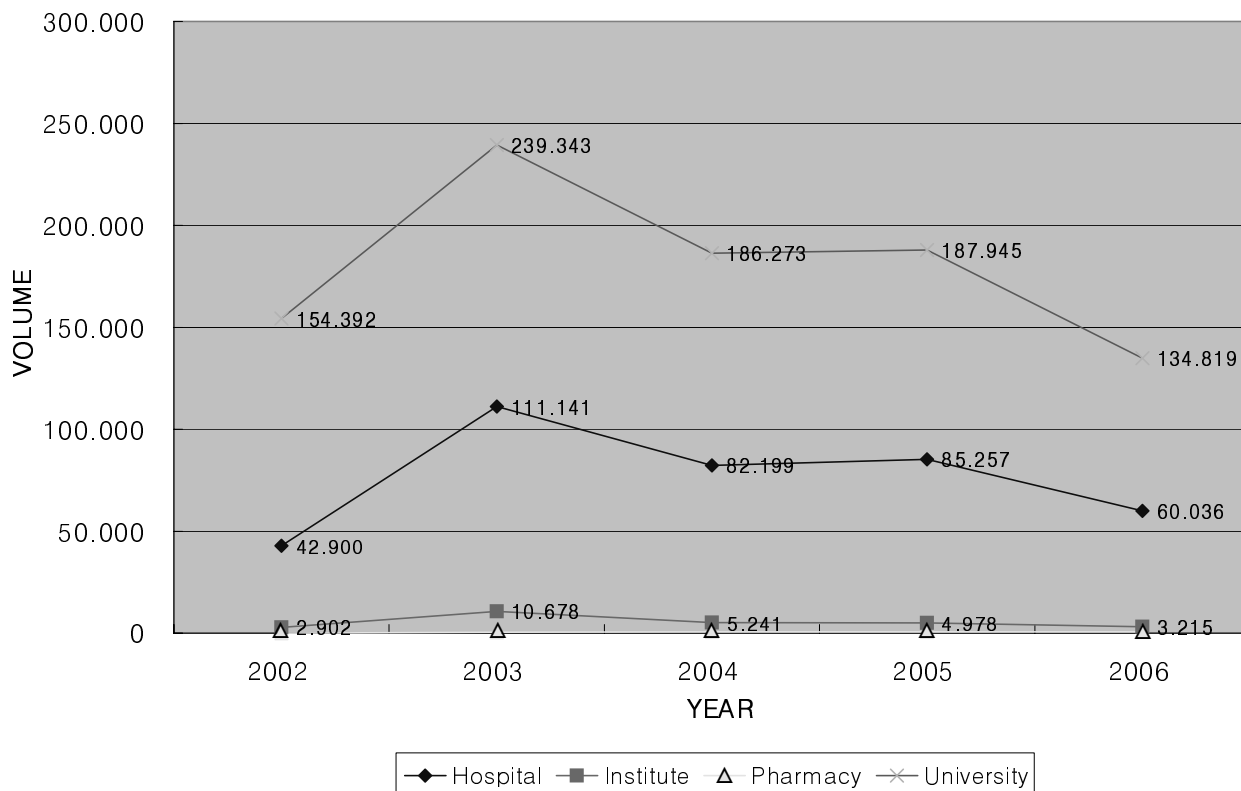


Figure 3: Total number of DSS requests classified by library type, 2002-2006.



journals; this seems to be attributable to the mass purchase opportunity provided by the KESLI consortium.

According to Chae et al. (2006), the average number of Elsevier paper journals subscribed by the 263 KESLI-Elsevier consortium members was no more than 33 at the end of 2004. But KESLI's proposed purchase included all 1,908 Elsevier titles available electronically for a contracted three-year period 2003–2005. The consortium member libraries participated willingly with almost 40 times as many Elsevier journal subscriptions as before. Chae et al. posit that the publishers' unprecedented proposals were the main reason why the number of KESLI members grew so rapidly in a short time.

In this paper, 102 libraries of the 173 KMLA members have subscribed to electronic journals by participating in KESLI. On the other hand scientific journals supplied by this consortium through mass purchase account for over 80% of all subscription journals. Looking at the subscriptions of the KMLA group in detail, subgroups have purchased academic journals with some slight difference according to library types, hospital libraries (94%), medical university libraries (81%), institute

libraries (82%) and pharmaceutical company libraries (98%).

DSS of KESLI members

This study collected and analyzed DSS data, between 2002 and 2006, for 108 of the 173 KMLA member libraries, excluding 65 libraries with missing values. Figure 2 shows the DSS transition over the past five years. In 2002, DSS volume was 201,124. In 2003, the volume increased to 393,336 or 80%. But it decreased to 301,283 in 2004. In the next year, it increased a little to 313,452. Finally in 2006, it decreased to 224,121. Comparing 2002 and 2006, the DSS total for 2006 displayed an 11% increase, but declined 43% from 2003 when the DSS peak occurred.

Figure 3 shows the transition of the DSS total by four library types over the past years. Medical university libraries had the greatest number of DSS requests with a DSS total of 154,392 in 2002. In the next year, the number rose to 239,343 or 55%. In 2004 and 2005, it diminished and finally in 2006 plummeted to 134,819. However, comparing 2002 and 2006, the DSS total for 2006 was only 13% less than 2002.

Figure 4: Average DSS requests of KESLI vs. non-KESLI members.

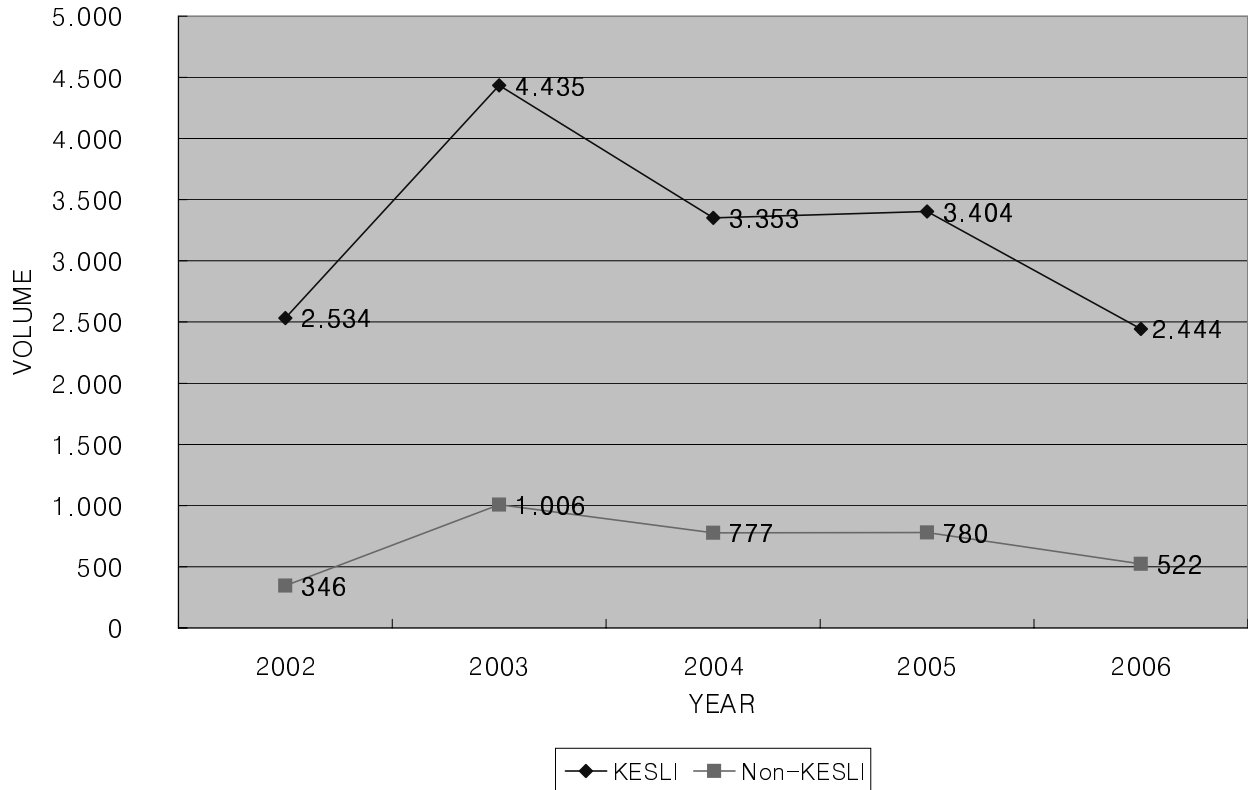
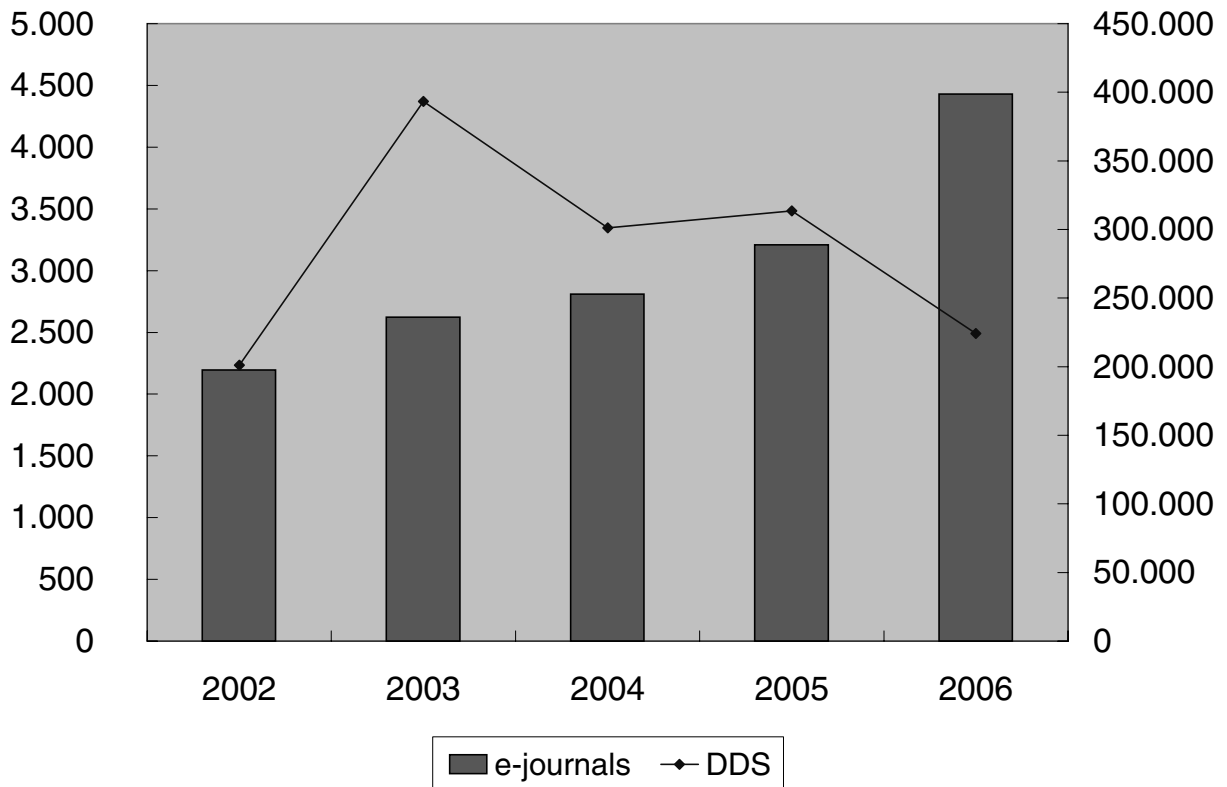


Figure 5: Comparison of DSS volume with the number of mass purchased e-journals, 2002-2006.



The next greatest number of requests was for hospital libraries. In 2002, the libraries had 42,900 DSS and grew to 111,141 in the next year. It has been declining slowly since 2004. Also, in the case of pharmaceutical company libraries and institute libraries, DSS increased rapidly in 2003, but both have seen decreases since 2004. Comparing all types of libraries, DSS requests for 2006 were higher than for 2002 with the exception of medical university libraries.

Figure 4 shows that pattern of DSS was different in the libraries that adopted the mass purchases with KESLI. For KESLI member libraries their average DSS requests were 2,534 in 2002. The number rose to 4,435 (175%) in 2003, but declined little by little after that time. In 2006, DSS averages for KESLI member libraries were lower than in 2002. For non-KESLI member libraries, DSS averages in 2002 were 346 and in 2003 the average was 1,006, so it grew 291%, but declined slowly after that. Lastly, in 2006 the average DSS numbers were 522, lower in comparison with 2005, but higher than in 2002.

The bar chart (Figure 5) shows the average number of electronic journals subscribed to by the 102 KMLA member libraries joining KESLI between 2002 and 2006. Average electronic journal subscriptions increased annually from 2,179 in 2002; 2,624 in 2003; 2,811 in 2004; and 3,208 in 2005. In 2006 they rose to 4,429, twice as many titles as in 2002.

The line chart in Figure 5 shows usage of DSS from 2002 to 2003. Mass purchase started in 2000, but DSS numbers did not decrease until 2004. KESLI did not affect DSS until 2003, the early days of the consortium. However, DSS requests have dropped little by little as a consequence of the proliferation of electronic publications at medical libraries as well as academic libraries in South Korea since 2004.

Conclusion

Scholarly journal prices are going up rapidly year after year, whereas academic library budgets are rising by a smaller degree. For this reason, library purchasing power has been lost and it has been more difficult for academic libraries to satisfy users' demands well. Therefore we cannot help considering DSS as an alternative for journal sub-

scriptions or as a last solution to meet users' demands.

It is a fact that DSS has improved like other library services. Users of South Korean medical libraries find it easier to obtain article copies through DSS than in the past. Waiting time after requesting is also decreasing. But in this study, DSS requests of KMLA members showed a downward tendency since 2004. Even though the total user numbers in South Korean medical libraries were not reduced at all.

The main reason for the decrease in DSS volume may be as follows: there is social pressure that forces scientists to produce more research outputs than before, so their demands are concentrated on full texts, not on bibliographical information. Nowadays, in addition to DSS scientists can get more full texts using many methods. For example, South Korea academic libraries have had an opportunity to receive electronic journal bundles provided by publishers after KESLI was initiated. KMLA member libraries participating in KESLI therefore collect many scholarly journals in a short time. The increase in the volume of available scholarly journals in the libraries might result basically in a decrease of DSS demand. This phenomenon has been verified in case studies of local libraries or DSS bodies.

In this paper, there was an unexpected finding – that the DSS volume did not begin to decline until 2004. This was four years after the advent of KESLI. This is likely to stem from the changes in the South Korean economic situation. Just as in other countries, the budgets of South Korean medical libraries have a tendency to depend on the domestic economic conditions. For example, at the end of 1997, right after the abrupt economic crisis, most South Korean medical libraries had to cut their budgets. In 2001, four years later, reduced budgets recovered. From 1997 to 2001, users of KMLA member libraries had difficulty satisfying users' demands with their weak library collections, so they had to use the DSS frequently. Yet in 2002 and 2003, right after the recovery of the financial crisis, DSS usage kept pace steadily. In those days the budget got back on a level with before the crisis, but the libraries could not purchase enough back issues. Their users still needed DSS even though the IMF crisis was ending.

On the other hand, KESLI had a contract supplying not only current issues but also back issues

from many publishers. As mass purchases with current issues and backfiles supplied by KESLI have come about in a short time, DSS demands declined remarkably. Mass purchase often provides low or non-used titles as well as frequently used core titles. The former too often evoke users' dissatisfaction or complaints, whereas the latter titles stimulate usage greatly. If the mass purchase includes some core titles, it would help satisfy demands greatly. It seems that users' DSS requests focus on core titles in South Korean medical libraries like other countries. The more mass purchase libraries join with KESLI, the more academic journals and their back issues they hold. Also, the more academic journals they have, the more favourite core titles they hold. Meanwhile mass purchase including high-use titles increases the possibility to decrease DSS volume.

The rate of DSS decline in South Korean KMLA member libraries has slowed. The present DSS statistics point to the possibility of a rally. Thus, the transition of DSS in South Korean KMLA member libraries requires further study in the near future.

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