

World Book and Copyright Day 2010
Medlars Center 이용자 세미나

Open Access 출판의 재무 분석

서 정 옥

아시아태평양 의학학술지 편집인협의회 사무총장
Basic and Applied Pathology 편집위원장
Creative Commons Korea 이사
서울대학교 의학도서관장

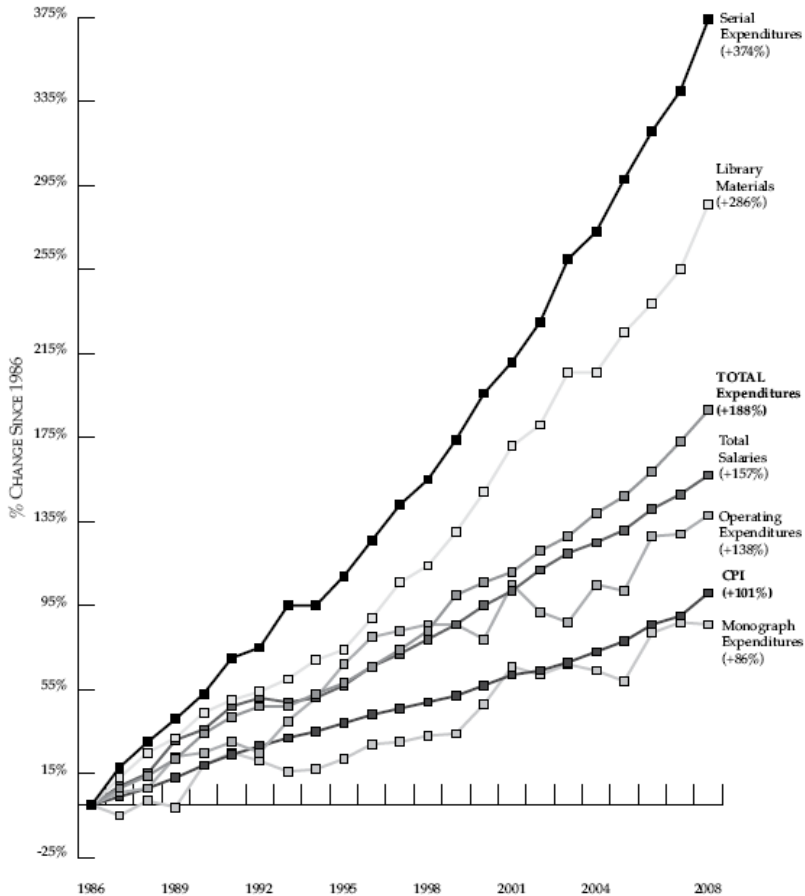
차례

- 1. Journal Crisis**
- 2. Impact Factor Inflation**
- 3. Suppliers' Trends (Publishers)**
- 4. Consumer Trend (Libraries)**
- 5. APC of Open Access Journals (Business)**
- 6. Positioning of Free Access Journals (Academic)**
- 7. Role of Medical Library**

1. Journal crisis는 현재 진행형

GRAPH 4

EXPENDITURE TRENDS IN ARL LIBRARIES, 1986-2008



Source: ARL Statistics 2007-2008, Association of Research Libraries, Washington, DC

- 113개 대학도서관이 2007-2008년 30억불 지출

- 41.4% 도서구입비
- 45.4% 인건비

- 학술지 구입비

- 1986년 150만불 (100%)
- 2004년 558만불 (375%)
- 2008년 710만불 (474%)

- 1986년 대비 2008년

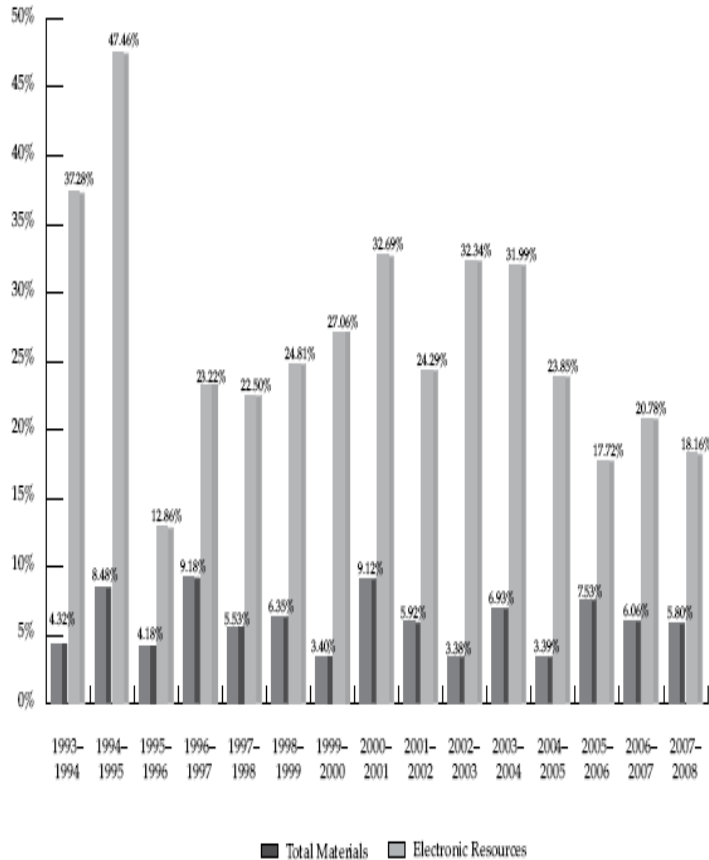
- 도서구입비 386%
- 총 지출 288%
- 총 인건비 257%
- 단행본 구입비 186%

<http://www.arl.org/bm~doc/arlstat08.pdf>

• 전자 자료 구입비 증가율 / 전체자료 구입비 증가율

GRAPH 6

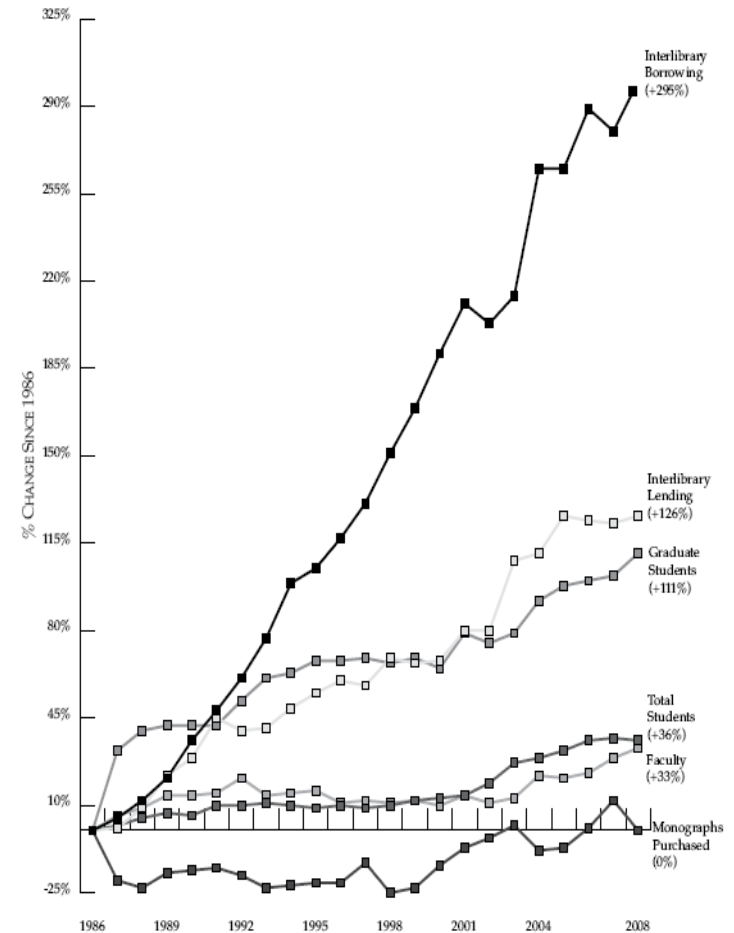
ELECTRONIC RESOURCES VS. TOTAL MATERIALS EXPENDITURES, 1993-2008
YEARLY INCREASES IN AVERAGE EXPENDITURES



• 도서관 간 협력의 중요성 - 상호대차 1986년 대비

GRAPH 3

SUPPLY AND DEMAND IN ARL LIBRARIES, 1986-2008*



*Serial and monograph data includes electronic resources from 1999-2000 onward.
Source: ARL Statistics 2007-2008, Association of Research Libraries, Washington, DC

2. Impact Factor Inflation

◆ 학술지/논문 팽창이 학술 정보에 미치는 영향은?

- 전문학술정보의 Open Access 확대
- Google을 통한 자유로운 학술정보 유통
- 논문의 접근성 향상
- 논문 쓰기가 쉬워진다.
- 도서관이 필요 없다.

정말 그럴까요?

• Impact Factor Inflation

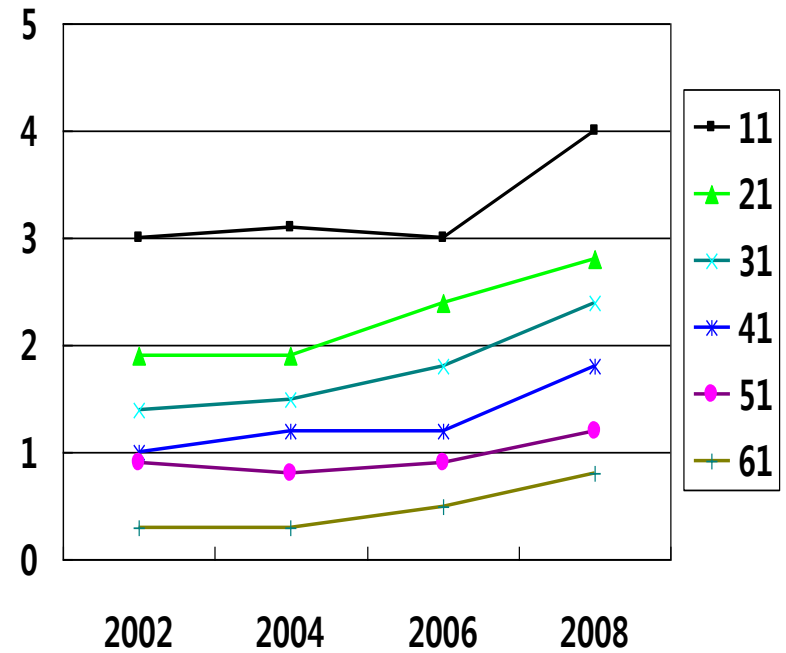
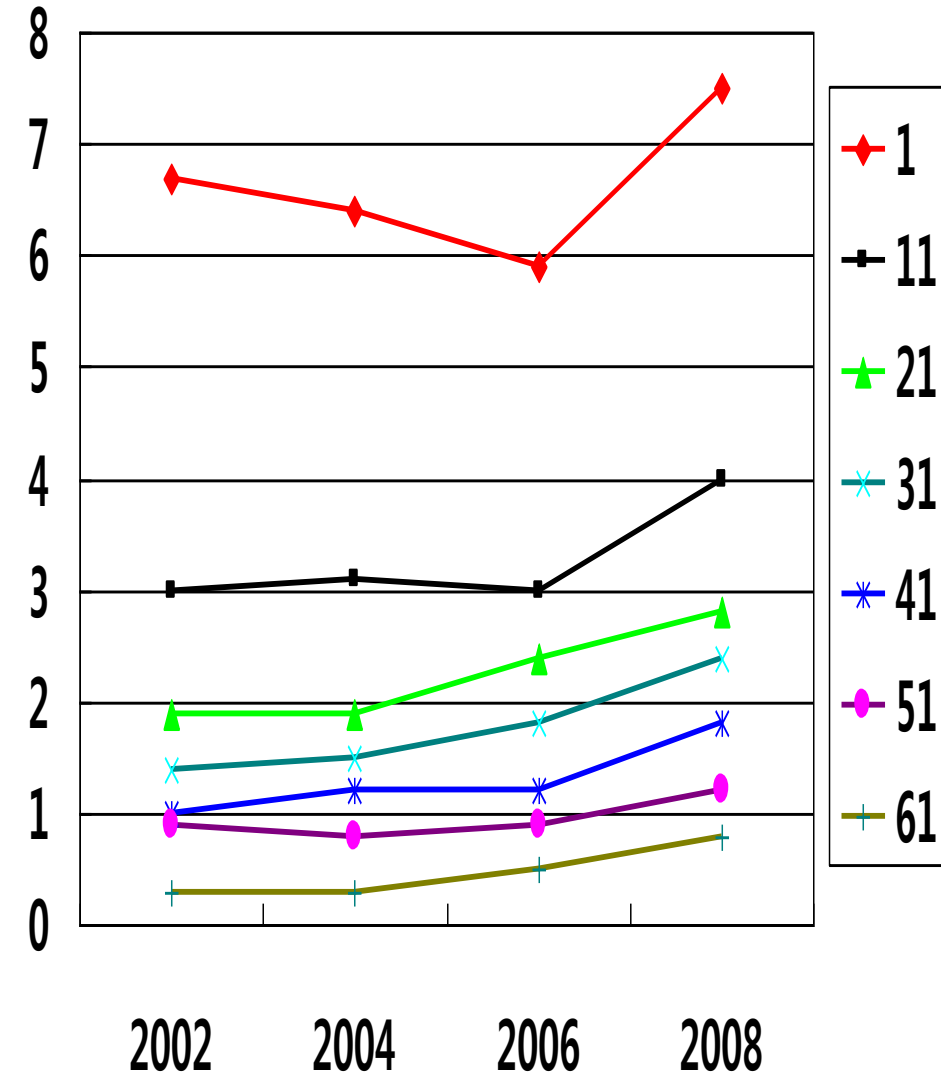
- Pathology

Year	Median IF	Aggregate IF	Journals	Articles	Total cites
2002	1.326	2.398	64	5,790	170,023
2004	1.500	2.312	65	6,097	176,764
2006	1.632	2.447	64	5,819	180,176
2008	1.818	2.658	69	6,288	212,744
2010	?	?	?	?	?

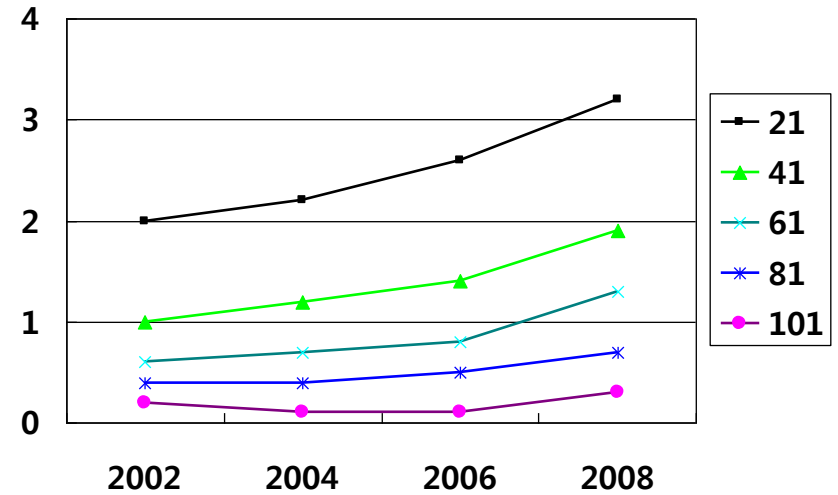
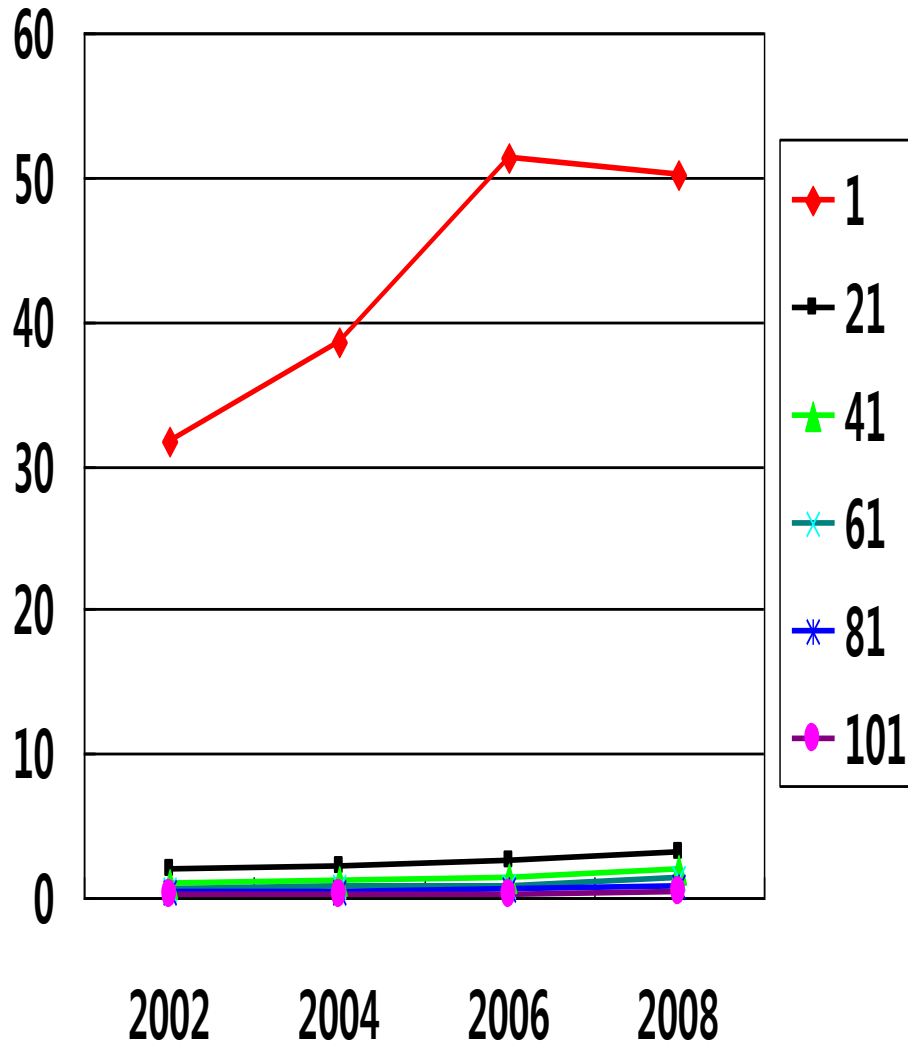
- Medicine, general & internal

Year	Median IF	Aggregate IF	Journals	Articles	Total cites
2002	0.722	3.698	107	12,426	601,388
2004	0.835	4.276	103	12,695	658,118
2006	1.188	4.554	103	12,593	728,488
2008	1.492	4.627	107	13,909	874,710
2010	?	?	?	?	?

• IF Trend of [Pathology] Journals



• IF Trend of [Medicine general & internal] Journals











3. Suppliers' Market Trend

nature.com/authors/author_services/about_nature_res.html

search journals : authors ...

Nature journals publishing research

 <p>Nature Impact factor 31.434 Journal homepage</p>	 <p>Nature Biotechnology Impact factor 22.297 Journal homepage</p> <p>NEW!</p>
 <p>Nature Cell Biology Impact factor 17.774 Journal homepage</p> <p>NEW!</p>	 <p>Nature Chemical Biology Impact factor 14.612 Journal homepage</p> <p>NEW!</p>
 <p>Nature Chemistry Impact factor due 2011 Journal homepage</p> <p>NEW!</p>	 <p>Nature Genetics Impact factor 30.259 Journal homepage</p> <p>NEW!</p>
 <p>Nature Geoscience Impact factor due 2010 Journal homepage</p> <p>NEW!</p>	 <p>Nature Immunology Impact factor 25.113 Journal homepage</p> <p>NEW!</p>

http://www.ahajournals.org/circportfolio/

Circulation Journals

Current Editor's Picks FREE

- Circulation**
Propranolol Decreases Tachycardia and Improves Symptoms in the P Syndrome: Less Is More
[Abstract](#) | [Full Text](#) | [PDF](#) | [CME](#)
- Circulation: Arrhythmia and Electrophysiology**
NEW! [Abstract](#) | [Full Text](#) | [PDF](#) | [Data Supplement](#)
- Circulation: Heart Failure**
NEW! [Abstract](#) | [Full Text](#) | [PDF](#)
- Circulation: Cardiovascular Imaging**
NEW! [Abstract](#) | [Full Text](#) | [PDF](#)

AHA JOURNAL INFORMATION

- Subscriptions
- Author Resources
- Topic Map
- RSS Feeds
- AHA Journals CME

AHA

- AHA Home
- AHA Journals Home
- About AHA
- Membership Directory
- Statements and Guidelines
- Scientific Councils
- AHA News
- Scientific Meetings

BROWSE TOPICS

- American Heart Association
- Basic Research
- Behavioral and Social Science Issues
- Cardiology and Cardiovascular Diseases
- Cardiovascular Surgical Procedures
- Clinical Research
- Emergency Cardiovascular Treatment
- Pediatric and Congenital Heart Disease
- Preventive Medicine
- Risk Factors
- Stroke and Cerebrovascular Disorders

- Nature Publishing Group:
 - ✓ 16 new Nature Research Journals
 - ✓ 15 new Nature Review Journals

- 미국 심장학회 학술지
 - ✓ 5 traditional Journals
 - ✓ 6 new Journals

• 국민의 전문학술지 출판 시장의 팽창

• Nature

- 2008년 인용지수가 31.434인 초일류 학술지
- Nature Publishing Group 이라는 출판사: 76개의 학술지를 출판하는 공룡 출판사
- 76개의 학술지 중 2000년 이후에 창간된 학술지가 33개
- 다국적 출판기업의 학술지 팽창 정책
- 팽창 정책의 배후: 학회: 출판사에 학술지 출판을 위탁하고 이익을 공유

• Circulation

- Lippincott Williams & Wilkins
- 2008년 6개의 분야별 학술지를 동시에 창간
- 명칭을 Circulation: Heart Failure 등으로 하여 Circulation의 자매 학술지임을 표시

• 학회와 출판사가 공조하여 학술 논문 팽창을 주도

- 우리 학술지가 살아남는 길은 impact factor를 높여 경쟁력을 키워야

4. Consumers' Market Trend

1) OA Journals by Country

#	Country	Total number of journals in DOAJ								
		2002	2003	2004	2005	2006	2007	2008	2009	2010
1	United States	20	226	317	412	481	589	802	976	1037
2	Brazil	0	8	126	174	226	287	361	406	433
3	United Kingdom	5	120	167	206	246	279	312	372	404
4	Spain	0	6	26	89	139	166	228	258	277
5	Germany	1	13	32	69	92	122	148	171	187
6	India	0	15	33	47	65	84	107	157	186
7	Canada	0	24	36	47	64	79	104	134	147
8	Turkey	0	4	13	38	50	75	100	124	136
9	Italy	0	4	14	35	51	63	75	102	119
10	Chile	0	3	44	63	76	83	97	107	108
11	Japan	2	23	66	88	91	91	95	102	102
79	South Korea	0	0	0	0	0	0	0	2	2
Total		31	584	1158	1760	2288	2863	3733	4513	4970

- <http://www.doaj.org>
- 2010. 4. 22일 현재,
- 등재된 저널 4,970건 중 2,023건이 article level의 저널이며 385,461건의 논문이 수록

2) Proportion of OA Journals

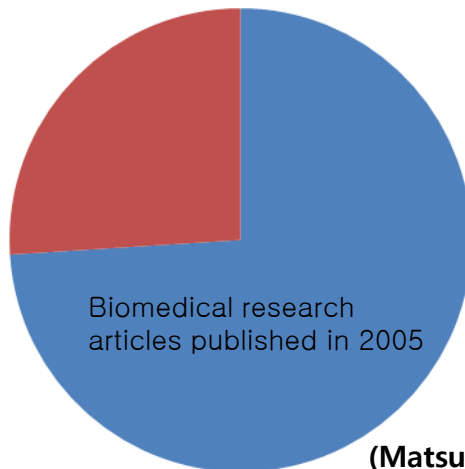
• Availability

The number of articles freely availabl...



(Bjook et al. 2009)

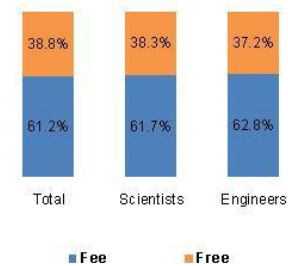
A freely-available free text version on the web...



(Matsubayashi et al. 2009)

• Usefulness

Do Fee or Free Information Services Provide Higher Quality Information?



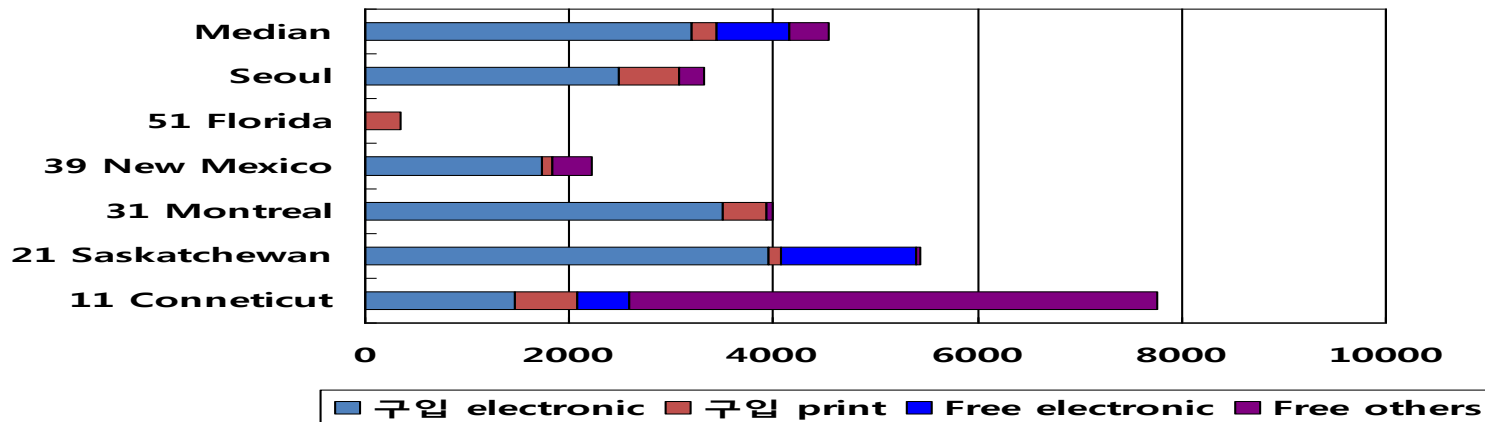
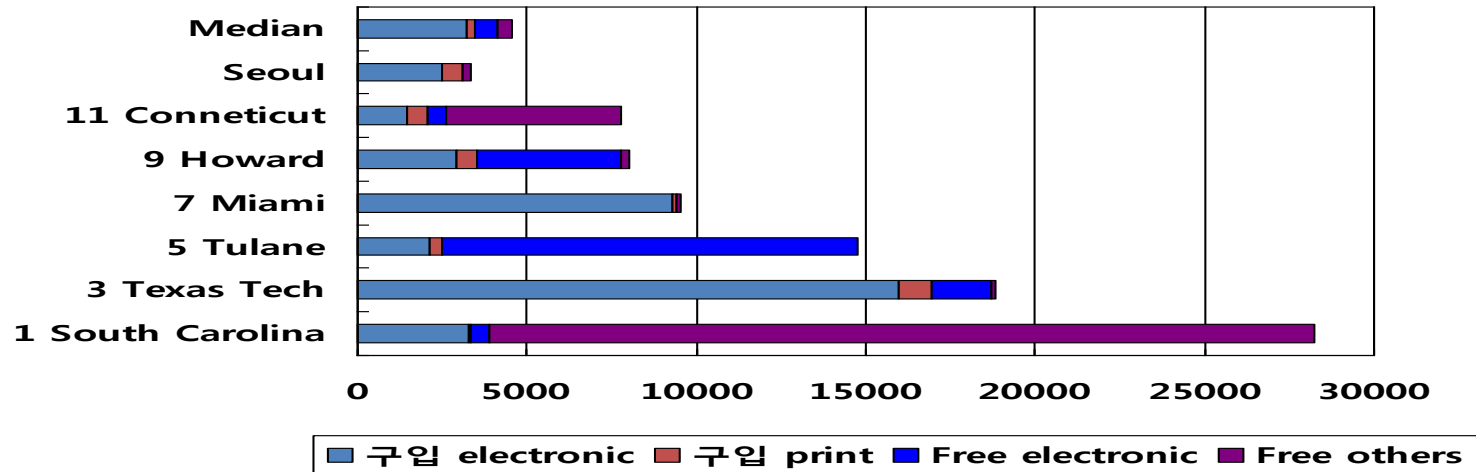
Source: Outsell's Information Markets & Users Database, December 2008 Survey

Taken from Outsell's Market Intelligence Service Report: STM End-User Survey Part 1 – Scientists and Engineers
http://www.outsellinc.com/all_segments/products/838

OUTSELL

- Available form : The **stm** report, September 2009

3) Open Access vs Purchased



5. Open Access Article의 APC (Business)

출판사	구분	Charge	OA 프로그램명
ELSEVIER	Cell Press	\$5,000/article	-
	Lancet	£400/page	
	All journals	\$3,000/article	
NATURE PUBLISHING GROUP	Cancer Gene Therapy 외 11개 저널	\$3,000	Author pays Hybrid Model
OXFORD UNIV PRESS	Full price online subscription	\$2,250	Oxford Open Pricing
	Does not have a full price online subscription	\$3,000	
WILEY-BLACKWELL PUBLISHING, INC	Most journals	\$3,000	OnlineOpen
	FEBS Journal, Journal of Evolutionary Biology, Monthly Notices of the Royal Astronomical Society, Protein Science, and Stem Cells	free~\$2,500	
AMER CHEMICAL SOC	non-ACS member non-ACS subscribing institution	\$3,000	Author choice
	non-ACS member ACS subscribing institution	\$2,000	
	ACS member non- ACS subscribing institution	\$1,500	
	ACS member ACS subscribing institution	\$1,000	
PUBLIC LIBRARY SCIENCE	저널에 따라 다름	\$1,350~\$2,900	-
SPRINGER	All articles	\$3,000	Open Choice
B M J PUBLISHING GROUP	보다 전문적인 저널에 낮은 투고료 부과	\$2,220/\$3,145	Unlocked

6. Positioning of Free Access Journals (Academic)

- Quality issue
- Post-publication Activities
- APC issue
 - 국내 출판 Open Access Journal의 적정 투고료는?
 - 연구비 없는 연구 활동에 대한 배려

• Unit cost of an article?

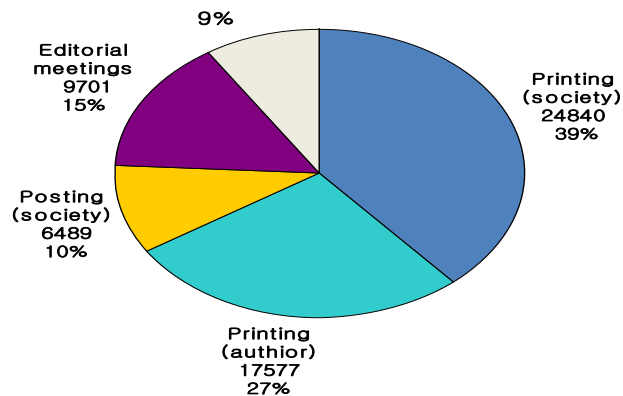
National Journal A

Printing (society)	U\$24,840
Printing (Author)	17,577
Posting (Society)	6,489
Editorial meetings	9,701
Proof reading	5,817

TOTAL COSTS U\$64,425

78 articles per year:

Unit cost per article U\$826



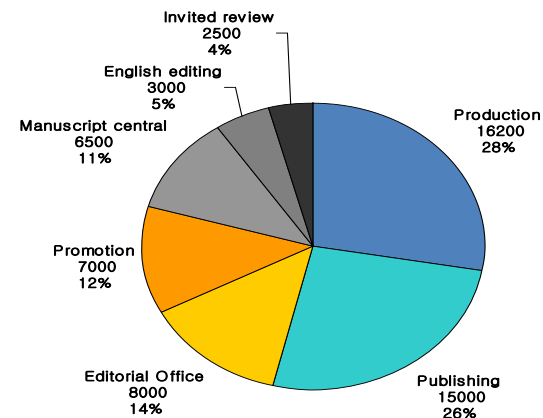
Multinational Journal B

Production (issues)	U\$16,200
Editorial Office costs	8,000
Manuscript Central	6,500
English Editing Service	3,000
Invited Review	2,000
Promotion	7,000
Publishing Charges	15,000

TOTAL COSTS U\$ 57,700

60 articles per year:

Unit cost per article U\$962



• JKMS의 월간 발행과 Open Access

- JKMS의 2008년의 인용지수는 0.843이고 수록 논문은 196편
 - Yonsei Med. J.: 인용지수 0.784, 수록 논문 151편
 - Molec. Cells: 인용지수 2.023, 수록 논문 169편
- JCR에 수록된 107종의 종합의학학술지 중 78위
- JKMS 2010년의 인용지수?
- 다른 국내 전문 학술지에 미치는 영향?
 - Sherpa Romeo, DOAJ 등록
 - APC 현실화

7. 도서관은 지식 환경 지킴이

- 학술지 증가
 - 발표 논문수 증가
 - 학술지 구입비용 증가
 - 개인 이용자의 편의성 증가
 - 연구자 개인의 투고료 증가
-
- 학술단체의 입장: 학회 수입 증가
 - 출판사의 입장: 출판 수입 증가
 - 도서관의 선별 작업/ 가격 협상이 중요
 - 정부의 지원 정책은 Open Access