Paid Open Access: A Comparative Study of Selected International Publishers

DR. RUPAK CHAKRAVARTY

Assistant Professor,
Department of Library & Information Science,
Panjab University, Chandigarh, INDIA.
Email: rupak@pu.ac.in

DIMPLE SHARMA

Library Assistant,
University Institute of Legal Studies,
Panjab University, Chandigarh, INDIA.
Email: dimpy.pieces@gmail.com

Abstract

Open Access as emerged as a global movement in the academic sphere providing free online access to scholarly literature. Generally author submits a manuscript to the open access journals and after the peer-reviewing and editorial process is over the article is published for free access and download. Some publishers have developed a model in which either the author(s) or their parent organization has to pay the open access fee or article processing charges. This paper aims to provide an insight of selected international publishers who have adopted paid open access model. In the data analysis section the facts have been presented in tables and charts focusing on various aspects of paid open access. At the end of the paper some practical recommendations have been made for sustaining and removing the shortcomings of this model.

Key words: Open Access, Paid Open Access, Article Processing Charges, OA Fee, Embargo.

1. Paid Open Access:

Some publishers are now offering an optional arrangement for articles, whereby they offer enhanced visibility of the final article through facilitating some form of free-to-view archiving. Typically this involves a substantial additional fee, which may or may not be included in research costs. Opinions differ as to the desirability of such options and to the scale of charges which are applied. Details differ between publishers. In some cases, the option simply consists of making the published version freely available from the publisher's own server, without any other rights or permissions being granted. In others, material is still placed under an embargo. Neither of these facilities can be counted as real "open access". Offerings from the major companies include archiving the published version in third party repositories without embargo, which comply with the principal funding mandates. These arrangements can be seen in a number of ways. A case can be made for this to offer a model for smooth transition to true open access publishing, with publishers reducing their subscriptions as additional income is obtained through this model. As it exists at present, in many cases it can rather be seen as an archiving service offered by publishers, rather than a publishing model.

2. Statement of the Problem

If the authors are made aware of such approach of making their paper available as OA they can put pressure on their parent organization or funding body to provide financial assistance by bearing the author fee. In absence of such awareness, many of the scholarly articles are published in paid journal & thus available to selected readers. Moreover very less higher education institutions like universities, research organizations, and government bodies are aware of such option. This lack of

awareness & information regarding fee details & embargo period is decreasing the impact of OA movement.

3. Scope of the Study

The study was aimed to explore & highlight the area & concept of paid open access available for authors. The study was identified the publishers which have the provision of author fees, publisher fee or paid open access & presented the results in a systematic manner. The actual amount of the fee was verified/cross checked from the selected publishers in the study. The study was also tried to identify any conditions attached with the publisher paid open access policy.

4. Objectives of Paid Open Access

1. To enhance the awareness regarding the paid open access.
2. To identify the publishers with paid open access options.
3. To do a comparative study of the selective publishers.
4. To analyze the embargo period & conditions if any of the publishers with paid open access publishers.

5. Research Methodology & Data Collection

- Journal article pertaining to the area of study was being examined.
- Search using goggle & google scholar was also being made with the search term like paid open access, author fees and open access fees.
- The SHEPRA (Securing a Hybrid Environment for Research Preservation and Access) / ROMEO (Rights MEtadata for Open archiving) was also considered to access & analyze the publisher with paid option for open access.

- Individual website of the selective publisher was also being consulted for up-dating & authentically the figures.
- Data was also collected for various aspect be ending email request to the individual publishers.

6. Limitations

Only selected international publishers was being covered which were of international repute & popular.

7. LITERATURE REVIEW

King, D. W. (2010) discusses a few of the favorable and unfavorable issues and proposes an approach that takes advantage of the favorable aspects and overcomes some of the unfavorable ones. It requires extensive government support, which may or may not be feasible, but the approach is presented here nevertheless. Some evidence is given for the potential savings that would be achieved by scientists, publishers and libraries in the US.

McLennan, J. (2009) focuses on the overview of business models for open-access journals by SPARC through its publication of a guide titled "Income Models for Open Access: An Overview of Current Practice." It notes the provision of several supply-side models by the guide including Article Processing Fees, Advertising, and Sponsorships. Furthermore, it states the supplication of the functionality for each model by the guide.

Bird, C. (2008)" discusses the paid OA initiative at OUP. In 2004, Oxford Journals began experimenting with an 'author-side payment' open access model for its

flagship molecular biology journal, Nucleic Acids Research (NAR). Since then, around 70 of its approximately 200 journals have adopted an open access model of some kind, providing a unique perspective on the practicalities involved and the potential impact of open access on established academic journals. Under NAR's full open access model, submissions and author satisfaction remain encouragingly stable, and most NAR authors are paying the open access charges. NAR's income per article declined in 2005, but increased once more in 2007. The journal remains financially viable under the new model. Uptake of the optional 'Oxford Open' model varies by discipline. It is highest in the life sciences: in the region of 17–25% for some molecular and computational biology journals. It is too soon to tell whether the 'Oxford Open' model will have an impact on subscriptions, usage, and citations, but further research is under way.

Cockerill, M. (2006) discusses various issues related to economically sustainability of open access publishing. An alternative to subscription revenue is required to cover the cost of open access publication as subscription revenue is inseparably dependent on limiting access. These costs can be recovered in a number of ways including the use of article processing charges (APCs). The key benefit of the APC method, which is often said to be the most well known method, is that revenue increases in proportion to the number of articles under the method.

McCabe, M. J., & Snyder, C. M. (2005) provide information on research regarding open access and academic journal quality. Authors submit articles of unknown quality to a journal. The quality of the journal is related to the talent of the editor in distinguishing bad from good articles. High quality articles are valuable to readers because they contain fewer bad articles that are costly to read

but provide no benefit. The journal can potentially charge fees to both sides of the market, authors and readers, and can further subdivide author fees into submission and acceptance fees. The claim that open access, because it involves author fees, may degrade quality as journals publish more, lower-quality articles to boost revenue.

Guterman, L., & Labi, A. (2005) gives insight on a survey conducted by the Kaufman-Wills Group regarding open-access journals. The study also covered the advantages of open-access journals over traditional journals, author fees in traditional and open-access journals and sources of financial support for open-access journals.

Butler, D. (2008) focuses on the online database of Public Library of Science (PLoS), which is often referred to as the PLoS One and was launched in December 2006. It notes that PLoS One keeps the nonprofit organization financial stable since it has generated an increased author fees due to its use of light peer-review system to publish any article that is methodologically acceptable. It further states that PLoS One had generated about $1.4 million from 1,230 articles published in 2007, and it has already published 1,158 articles in early 2008.

Gass, A. (2005) argues that many proponents of open access to journal articles online view costs of publication as an essential yet minor component of the cost of conducting research in the life sciences. Author-side charges for publication in open-access journals in those fields should, therefore, be paid principally by the agencies and foundations that fund research. Recent analyses of the potential cost-to-institution of a widespread

transition away from purchasing subscriptions to scholarly journals and towards paying open-access publication fees on behalf of affiliated faculty must be amended to reflect the reality that third-party funding agencies already pay the bulk of such fees in the life sciences, and will likely continue to do so.

Albanese, A. (2005) analyses the assessment given by a task force convened by the Cornell University Libraries (CUL) regarding author-pays open access (OA) publishing. Given the number of articles published by Cornell faculty members, the library system could "see its expenditures rise significantly if the library used its current subscription funds to pay for author fees." Instead, the task force predicts both subscriptions and open access publishing will coexist for the foreseeable future, particularly when subscriptions are "administered by scholarly societies, university presses, and academic libraries." The task force was convened by associate university librarian Ross Atkinson and led by John Saylor, director of the Engineering and Computer Science Library.

Wood, E. H. (2005). The recent movement towards "open access publishing" has developed very quickly. It began with publishers such as Public Library of Science and BioMed Central, persuading researchers to publish in their subscription-free or very low-cost journals. Commercial publishers then joined in, suggesting that authors pay a fee to have articles available free of charge on the Web. Most recently, government and professional organizations are recommending that research results be published this way. Implications for libraries include the impact on subscription costs, institutional subsidizing of authors' fees, and libraries' negotiations with administrators.

Beger, G. (2007) The article focuses on the so-called "Golden Road" to open access publishing, which indicates that the publishing costs of an article or book have been paid in advance by authors or sponsors and are also commercially sold. Additionally, the "Green Road," which focuses on free access to previously published materials, is compared. The author suggests that both ways are necessary in order to provide comprehensive research sources within the realm of science and humanities.

Crawford, W. (2005). This article addresses several issues concerning the concept of open access. Open access, OA for short, sometimes seems like a religion or a crusade. According to the author, he's still astonished at the fervor of so many parties in the U.S. That may be partly because OA is at the nexus of several overlapping ideas. OA is fairly simple in theory, but its ramifications, along with the conflicting concerns and needs of those involved in the movement, make it anything but simple in practice. The OA premise is straightforward: Scholars who write scholarly articles for scholarly refereed journals get paid in the currency of reputation and citations. Associate professors write scholarly articles to communicate research findings, but also to gain tenure. Tenured faculty writes to communicate research findings and to gain reputation and new grants. They don't get paid for the articles (or, typically, for refereeing submitted articles), but do gain from wide dissemination. The idea is that these articles should be freely available online as soon as they've been published. That access can be through open institutional and topical electronic archives or through OA journals, where access is free and costs are paid through institutional sponsorships, research-grant payments, and the like.

Aronson, Jeffrey K. (2005). Comments on the ethics of charging a fee to authors for the publication of medical research articles in academic journals. Reference to a study in which the attitudes of authors toward an open-access publishing model were assessed; Arguments on the ethics of charging fees for access to research and information; Potential harm in allowing free access to formerly subscription-based academic journal publications.

Berry III, John N. (2010). The author comments on open access to health research funded by the U.S. National Institutes of Health (NIH). The current policy dictates that published conclusions of NIH-sponsored research must be open to the public within a year. This was achieved after much campaigning with the government. The author says scholarly publishers oppose free open access because they want to be paid for their content, which is excessive in his view because the research is already paid for.

Sawant, Sarika. (2009) The overall aim of the research was to gather the data related to open access journal initiatives in India with respect to its type, funding agency/host organization, full text availability, article charges etc. Design/methodology/approach - Various sources of information were consulted such as literature, search engines, directories etc. Findings - Results shows that all 178 open access journals were peer reviewed, indexed and abstracted in various indexing and abstracting services, listed with DOAR and O-Jgate. Research limitations/implications - Open access journals that were available on internet were included but not those which were available on intranet. Originality/value - In the earlier literature it was mentioned that there were about 100 to 110 open access journals and no author paid journals. But the present

study discovered the existence of 178 open access journals with three author paid journals.

Mukherjee, Bhaskar (2009). Using 17 fully open access electronic journals published uninterruptedly during 2000–2004 in the field of Library and Information Science the present study investigated the trend of LIS Open Access e-journals' literature by analyzing articles, authors, institutions, countries, subjects, & references. Quantitative content analysis was carried out on the data, data were analyzed in order to project literature growth, authorship pattern, gender pattern, cited references pattern and related bibliometric phenomena. The authorship pattern indicates that team research has not been very common in LIS OA publishing and male authors were keener than female authors. Authors from academic institutions were paid more interest in OA publishing and most of them were from developed nations. The subject coverage of these OA e-journals was very vast and almost all facets of information and library science were covered in these articles. There were 90.10% of articles of these e-journals contained references and on an average an article contained 24 references. Of these, 38.53% of references were hyperlinked and 87.35% of hyperlinked references were live during investigation. The analysis of data clearly indicates that OA e-journals in LIS are rapidly establishing themselves as a most viable media for scholarly communication.

Flaxbart, David (2008). The author discusses the impact of open access (OA) publishing. He notes that objective and quantifiable evidence is needed in order to negate the claims of publishers that OA is evil and prove to all stakeholders that OA is worth the further investment and advocacy. He mentions that authors tend

to be indifferent on the issue of OA as they are ignorant of its existence and already have subscription access paid for by their institutions. He mentions the aim of OA advocates that involves the broadening of audience for scholarly literature.

Financing Open Access Journals

- **Fee-based open access journals**: Fee-based open access journals require payment on behalf of the author. The money might come from the author but more often comes from the author's research grant or employer. In cases of economic hardship, many journals will waive all or part of the fee. (This generally includes instances where the authors come from a less developed country). Journals charging publication fees normally take various steps to ensure that editors conducting peer review do not know whether authors have requested, or been granted, fee waivers, or to ensure that every paper is approved by an independent editor with no financial stake in the journal.
- **Non-fee open access journals**: No-fee open access journals use a variety of business models. As summarized by Peter Suber: "Some no-fee OA journals have direct or indirect subsidies from institutions like universities, laboratories, research centers, libraries, hospitals, museums, learned societies, foundations, or government agencies. Some have revenue from a separate line of non-OA publications. Some have revenue from advertising, auxiliary services, membership dues, endowments, reprints, or a print or premium edition. Some rely, more than other journals, on volunteerism. Some undoubtedly use a combination of these means."

- **Open Access Mandates:** A number of universities and grant-funding agencies are starting to require their grant recipients to make their publications freely accessible through an open access repository. The NIH Public Access Policy, for example, requires researchers who receive NIH funding to post their articles in PubMed Central within twelve months of publication.

Paid Open Access

Some publishers are now offering an optional arrangement for articles, whereby they offer enhanced visibility of the final article through facilitating some form of free-to-view archiving. Typically this involves a substantial additional fee, which may or may not be included in research costs. Opinions differ as to the desirability of such options and to the scale of charges which are applied. There are potential conflicts of interest, since the author is the actual customer, but journals can maintain rigorous editorial policies. This works well for narrowly defined communities, where authors and adders work in close collaboration.

Publishers' paid open access options, allow authors to deposit their articles immediately in open access repositories upon payment of a fee. The same publishers may also allow authors to deposit after an embargo period without payment of a fee.

3.6. Embargo Period

In academic publishing, an embargo is a period during which access is not allowed to certain types of users. The purpose of this is to protect the revenue of the publisher.

Various types exist:

- A moving wall is a fixed period of months or years.
- A fixed date is a particular time point that does not change.
- A current year (or other period) is setting a time point on Jan. 1 of the current year, so that all material earlier than that is available. Though fixed during the year, it will change each year.
- In delayed open access, the embargo separates the most recent period, for which a subscription is needed, from an older period, where a subscription is not needed and anyone may access the article. This is usually between 2 months and 5 years.

DATA INTERPRETATION & ANALYSIS

Research Methodology

The study was based on primary & secondary data. The SHEPRA/ ROMEO were considered to access & analyze the publisher with paid option for open access. Search using goggle & google scholar was also being made with the search term like paid open access, author fees and open access fees. The individual website of the selective publishers was also being consulted for up-dating & authentically the figures. The data obtained through selected publisher websites have been presented in 5 tables followed by their analysis & interpretation.

Table 4.1 Paid Open Access: Publishers & their country

Sr. No.	Country	No. of Publisher
1.	United Kingdom (UK)	7
2.	United States (US)	4
3.	Germany	1
4.	Netherlands	1
5.	Canada	1
6.	Switzerland	1

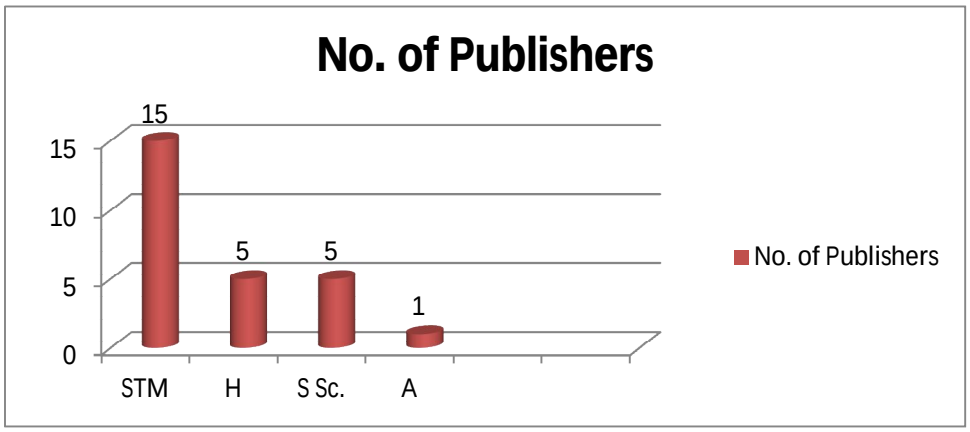

Fig. 4.1 Open Access Publishers & their country

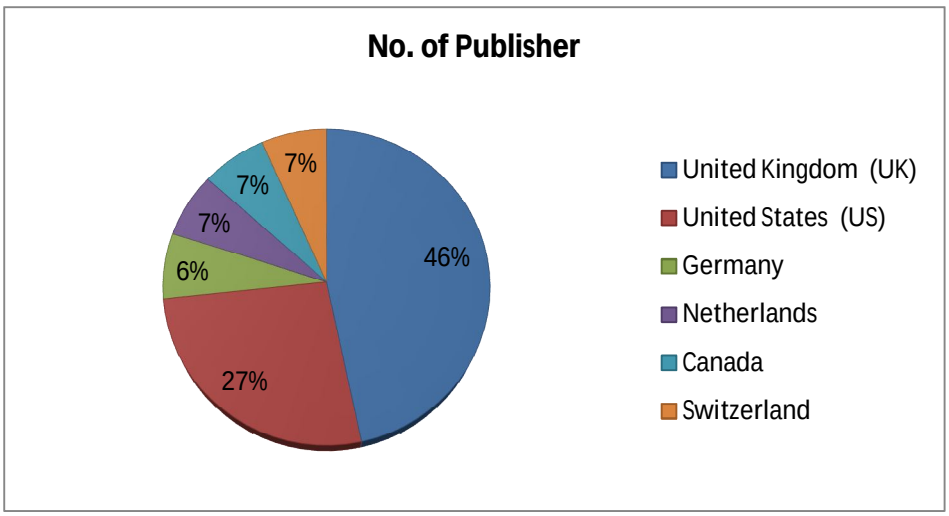

Fig 4.2 Open Access Publishers & their country shows in (%)

Analysis

The above table presents that the open access publishers with their country. It is very clear from above table that United Kingdom (UK) has maximum number of publishers i.e. seven publishers viz. BioMed Central, Cambridge University Press, Maney, Nature, Oxford University Press, Royal Society Publishing, Taylor & Francis. The above table also indicates that United States (US) has 4 publishers viz. Wiley-Blackwell, National Academy of Science, PLoS, Sage. One very prominent publisher Springer is from Germany country where as Karger Publisher is located at Switzerland. Canada also have one open access publisher i.e. Longwoods Publishing. All these publishers support paid open access method.

Table 4.2 Paid Open Option & Its Launching Year

Sr. No.	Name of the Publisher	Paid Option Name	Launch/ Origin of publisher & its Paid Option Name	
1.	BioMed Central	Biomed	2000	2000
2.	Wiley-Blackwell	Online Open	1922	2008
3.	Cambridge University Press	Cambridge Open Option	1584	2006
4.	Elsevier	Sponsorship Option	1880	2005
5.	Karger	Author Choice	1890	2007
6.	Longwoods Publishing	Longwoods Open	Data not available	Data not available
7.	Maney	More Open Choice	1997	2009
8.	National Academy of Science	PNAS Open Access Option	1914	2005

9.	Nature	Author Pays Hybrid Model	1869	2005
10.	Oxford University Press	Oxford Open	1478	2005
11.	PLoS	Open Access	2001	2001
12.	Royal Society Publishing	EXIS Open Choice	1660	2005
13.	Sage	Sage Open	1965	2011
14.	Springer	Open Choice	1842	2004
15.	Taylor & Francis	iOpen Access	1852	2006

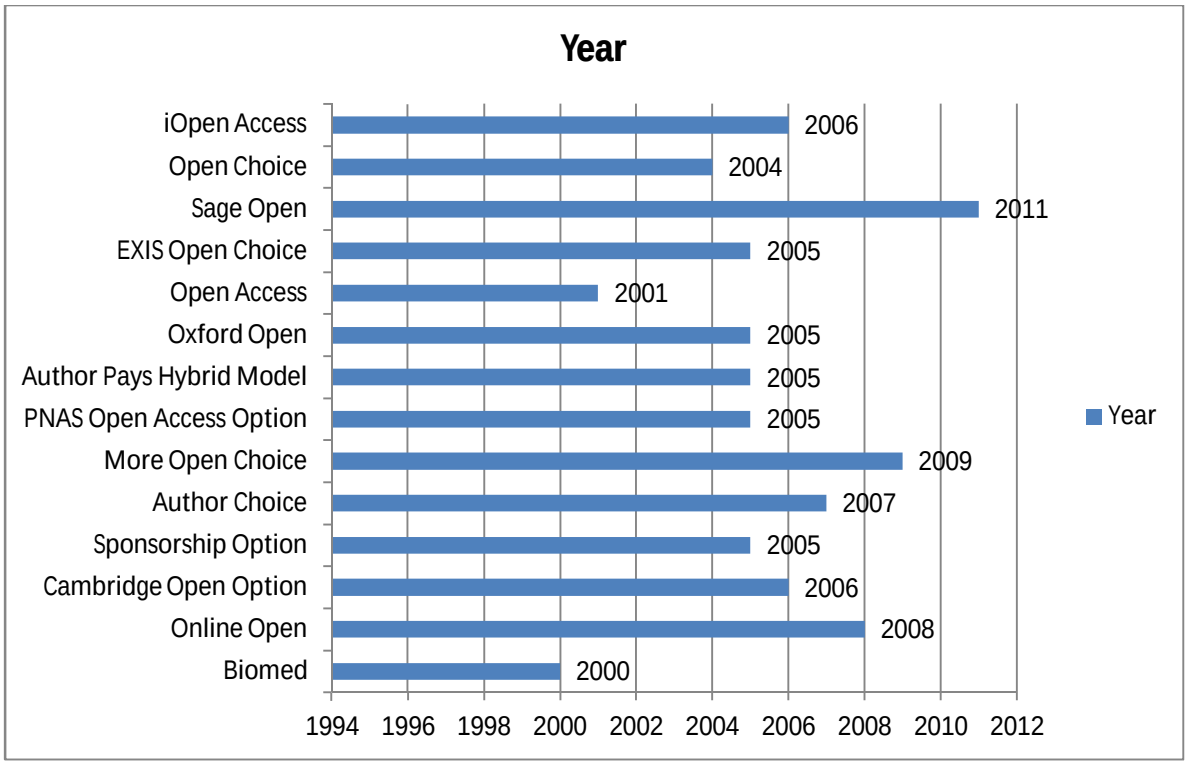

Fig 4.3 Paid Open Option & its Launching Year

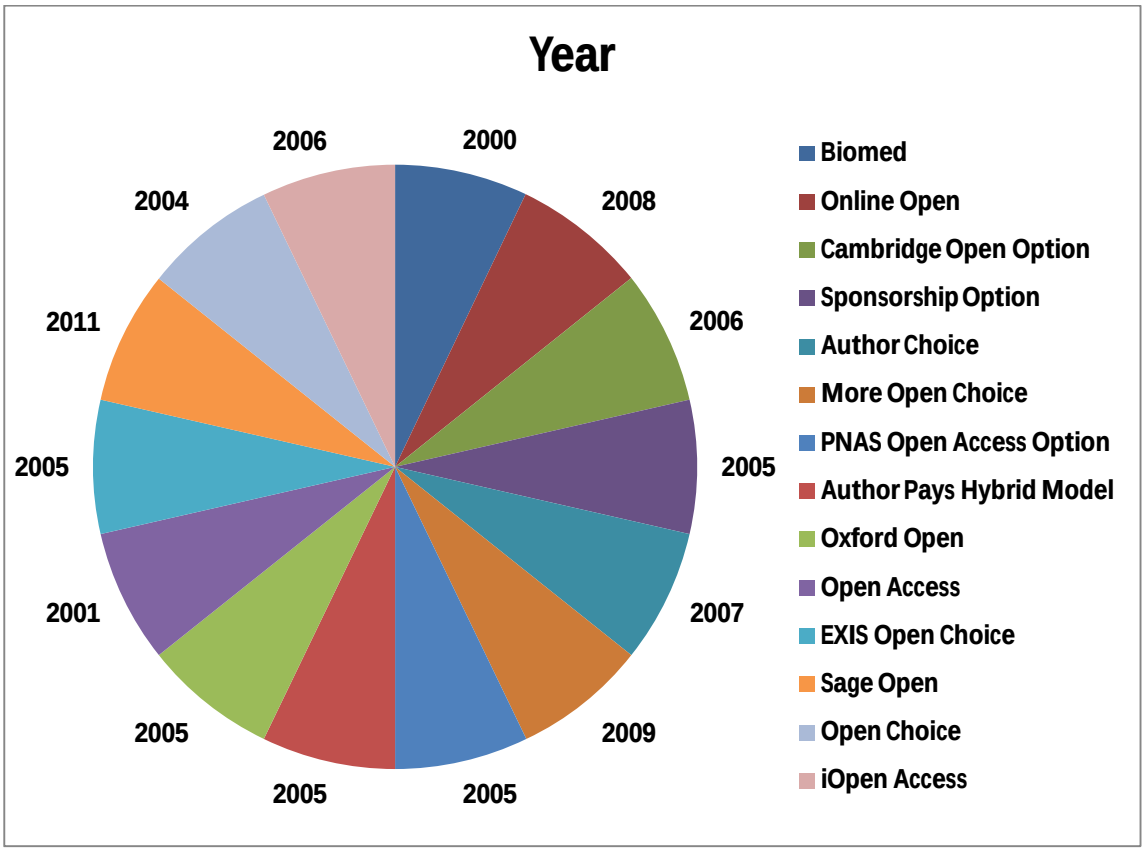

Fig 4.4 Paid Open Option & its Launching Year (pie-diagram)

Analysis

Although the SHERPA/ROMEO indicates the at their publishers which are contributing in the Open Access Movement through the provision of paid open access or sponsored open access. But the present study covers only fifteen prominent such open access publishers. Table 4.2 above indicates that most of the publishers having the provision of paid open access are commercial publishers that mean they provide subscription based access both in the printed & online form to the libraries worldwide. BioMed Central is solely & open access publisher. All the cases of paid option are around ten year old as it started first in the year 2000.

The above table also indicates that all of these publishers have given a brand name to their sponsored or paid open access service. For example, Wiley-Blackwell has Online Open, Karger has Author Choice, Sage has Sage Open, Springer has Open Choice, Maney has More Open Choice, Taylor & Francis has iOpen Access etc. It is also very clear from the above table that the paid option is relatively a new concept. While Elsevier started functioning in the year 1880 and sponsored option started into 2007. Oxford University Press which came into existence in 1586 and its paid open option was launched in the year 2005. Maney Publishing was formed in 1997 and its paid option service named as More Open Choice was launched in 2009. The table indicates that in all the cases of paid option was after the year 2000.It is also visible from the above table that in the year 2005 most of the publishers viz. Elsevier, National Academy of Science, Nature, Oxford University Press, Royal Society Publishing have started paid open access service. The earliest paid open publisher is BioMed & latest is Sage.

Table 4.3 Paid Open Access Publishers: Subject Coverage

Sr. No.	Name of the Publisher	Subjects	Number of Journals
1.	BioMed Central	STM	219 journals
2.	Wiley-Blackwell	STM, S Sc.& H	500 journals
3.	Cambridge University Press	STM, S Sc.& H	119 journals
4.	Elsevier	STM	450 journals
5.	Karger	STM	80 journals
6.	Longwoods Publishing	STM	Data is not available

7.	Maney	STM & H	104 journals
8.	National Academy of Science	STM, S Sc.	1 journal
9.	Nature	STM	41 journals
10.	Oxford University Press	STM, S Sc.& H	96 journals
11.	PLoS	STM	7 journals
12.	Royal Society Publishing	STM	9 journals
13.	Sage	STM & H	630 journals
14.	Springer	STM & A	51 journals
15.	Taylor & Francis	STM & S Sc.	530 journals

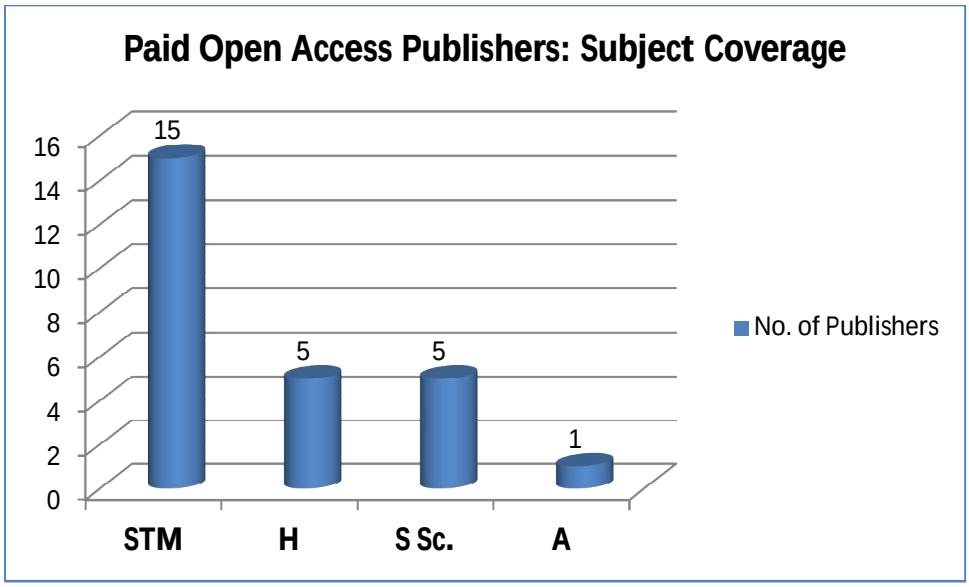

Fig. 4.5 Paid Open Access Publishers: Subject Coverage

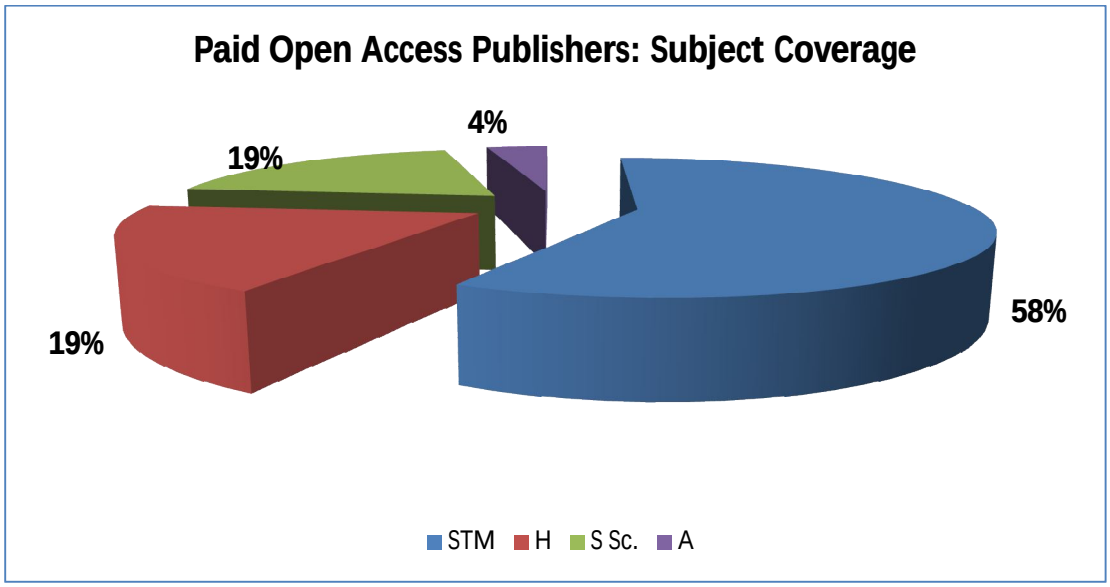

Fig 4.6 Paid Open Access Publishers: Subject Coverage

STM = Science; Technology & Medicine; H= Humanities; S Sc.= Social Science; A= Arts

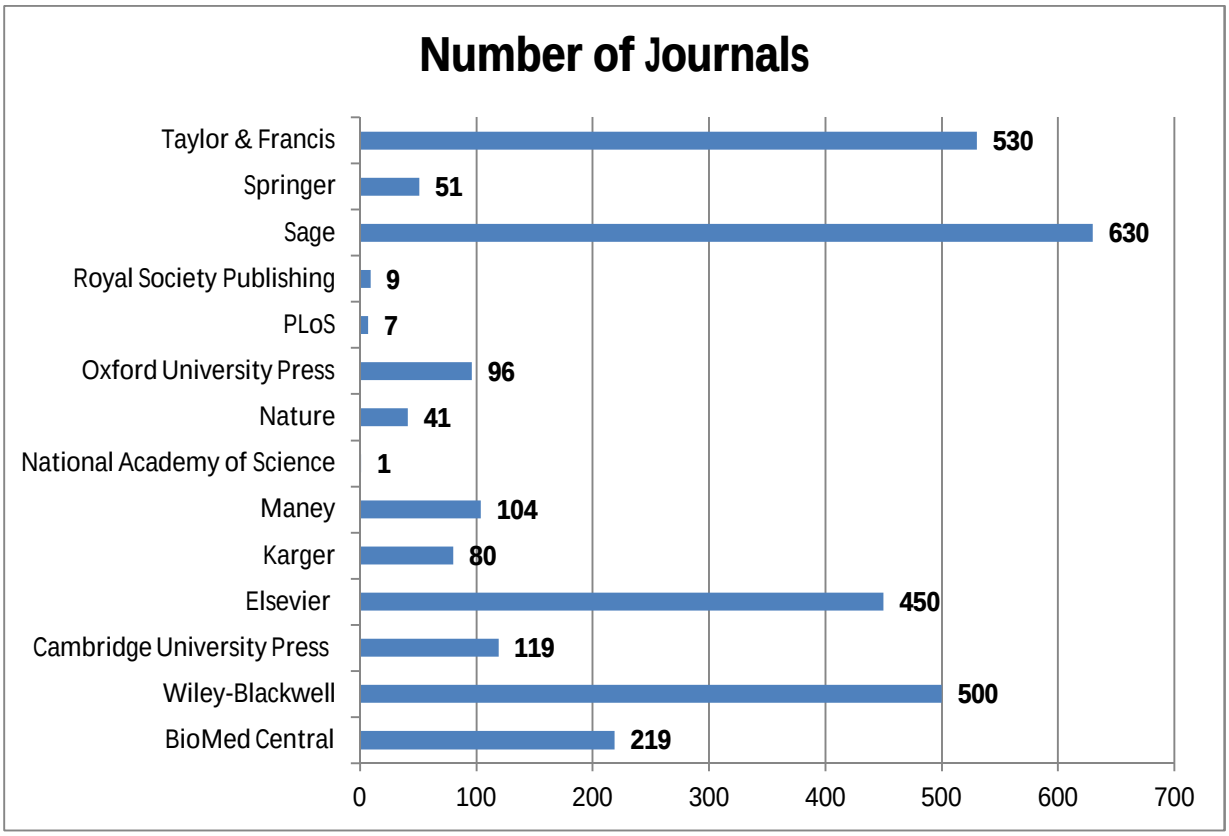

Fig 4.7 No. of Journals published by publishers

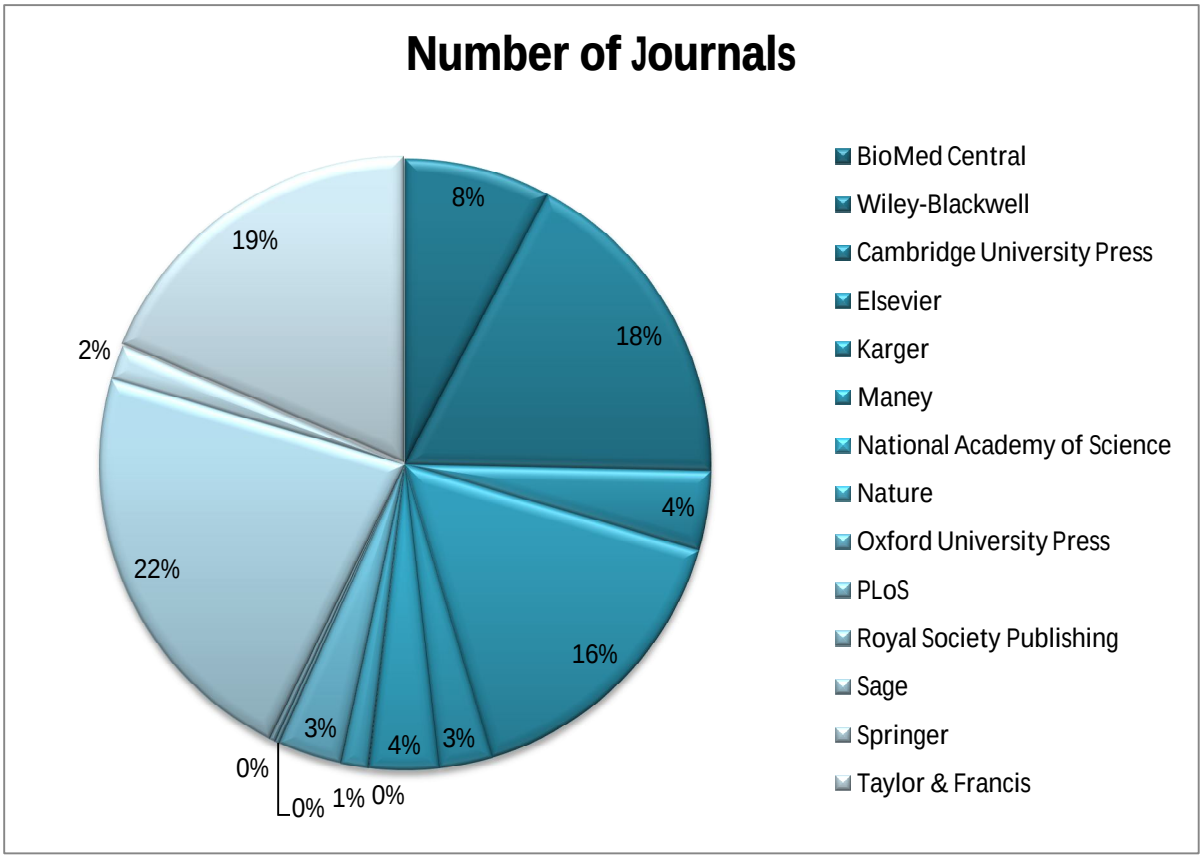

Fig 4.8 No. of Journals published by publishers

Analysis

Table 4.3.1 indicates that all of these publishers provide paid open option in various subjects i.e. STM (Science, Technology & Medicine), Humanities, Arts, Social Science, Business Transparent and Law. All of these publishers cover STM in its paid open option. BioMed Central's portfolio of 219 journals includes general titles BMC Biology and BMC Medicine alongside specialist journals (e.g. BMC Bioinformatics, Malaria Journal) that focus on particular disciplines. Five of the publishers having paid open option in humanities viz. Wiley-Blackwell, Cambridge University Press, Maney, Oxford University Press & Sage. Open Choice of Springer

also covers arts. Five of the publishers are also having paid open option in social science.

The above table indicates that the number of journals covered by these publishers in the paid open option ranges from a minimum of one journal published by National Academy of Science & maximum of 630 journals published by Sage. Taylor & Francis (530 journals), Blackwell-Wiley (500journals) Elsevier (450 journals), Oxford University Press (96 journals), Karger (80 journals) & Springer (51 journals) also having the significant collection of journals in paid open option. The paid open access journals of PLoS & Royal Society Publishing are very few viz. 7 & 9 respectively. But they are very highly reputed & in case of PLoS they are having very high impact factor. Data regarding Longwoods is not available. From the above table, the study shows that 58% publishers have paid open option in STM journals.

Table 4.4 Open Access Fees

Sr. No.	Name of the Publisher	Paid Option Name	Open Access Fees	Rates in $
1.	BioMed Central	Biomed	$2520/£1740/€1575 to $0/£0/ €0	$2520-$0
2.	Wiley-Blackwell	Online Open	$3000	$3000
3.	Cambridge University Press	Cambridge Open Option	£1500/ $2700	$2700
4.	Elsevier	Sponsorship Option	$3000	$3000
5.	Karger	Author Choice	CHF 3,000.00	$3,670
6.	Longwoods	Longwoods Open	$2500	$2500

	Publishing			
7.	Maney	More Open Choice	STM Journal-$2,000/ £1,250 Humanities Journal- $800/£500	$800--$2,000
8.	National Academy of Science	PNAS Open Access Option	$1275-regular fees $950- Discounts	$1275
9.	Nature	Author Pays Hybrid Model	$3000/£2000/€2400	$3000
10.	Oxford University Press	Oxford Open	Regular Fees- $3000/£1700/€2550 B developing countries- $1500/£850/€1275	$1500-$3000
11.	PLoS	Open Access	PLoS Biology & PLoS Medicine-$2900 PLoS ONE $1350 PLoS Genetics/PLoS Pathogens/PLoS Comutational/PLoS Biology/ PLoS Neglected Tropical-$2250	$1350-$2900
12.	Royal Society Publishing	EXIS Open Choice	$2380/£1400	$2380
13.	Sage	Sage Open	Introductory Rate-$195	$695

			Regular Fees-$695	
14.	Springer	Open Choice	USD3.000/EUR2.000	$3000
15.	Taylor & Francis	iOpen Access	$250/£1,725/€19,00	$250

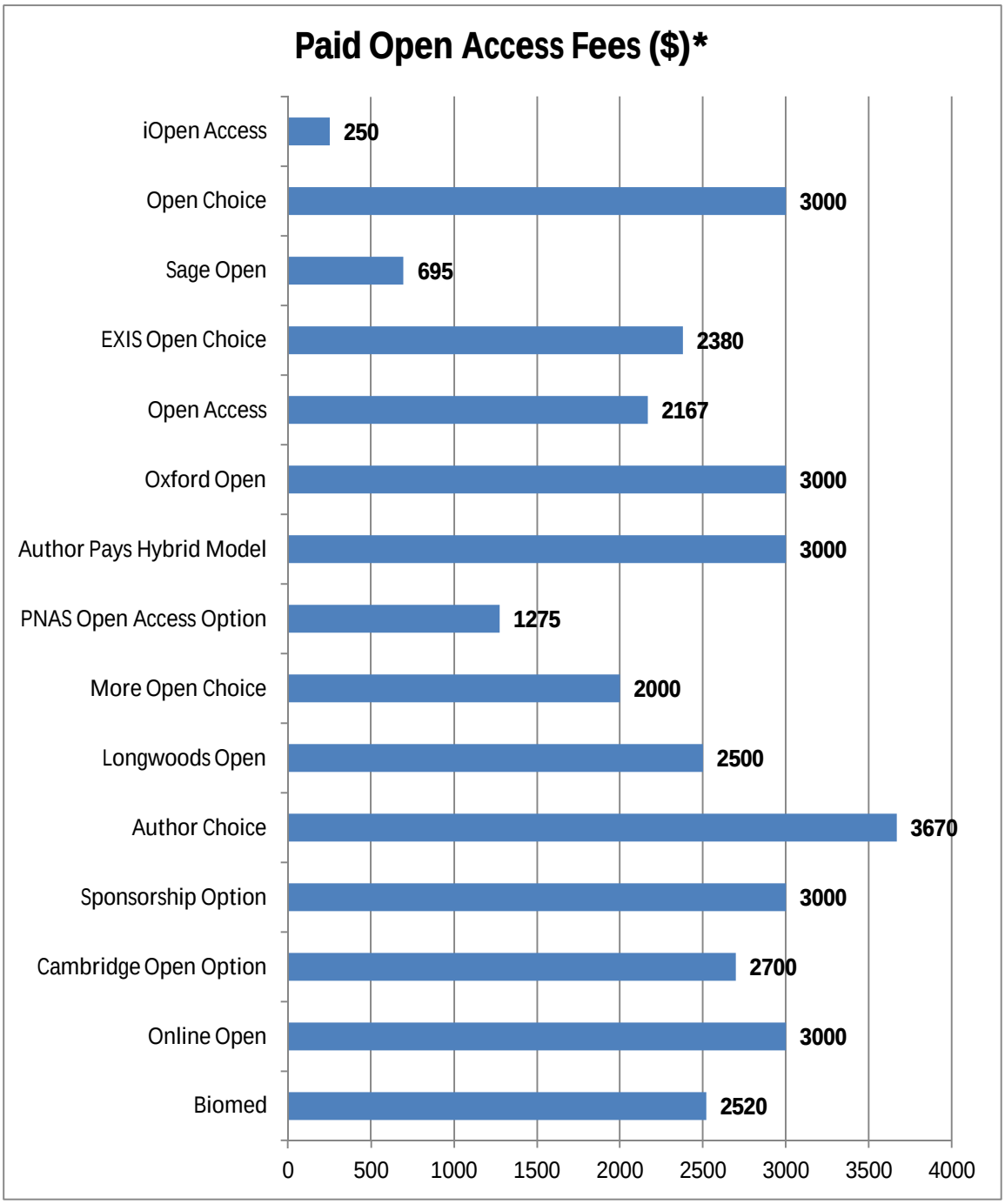

Fig. 4.9 Paid Open Access Fees*

*(*considering fee of Humanities Journals for Maney Publishing)*

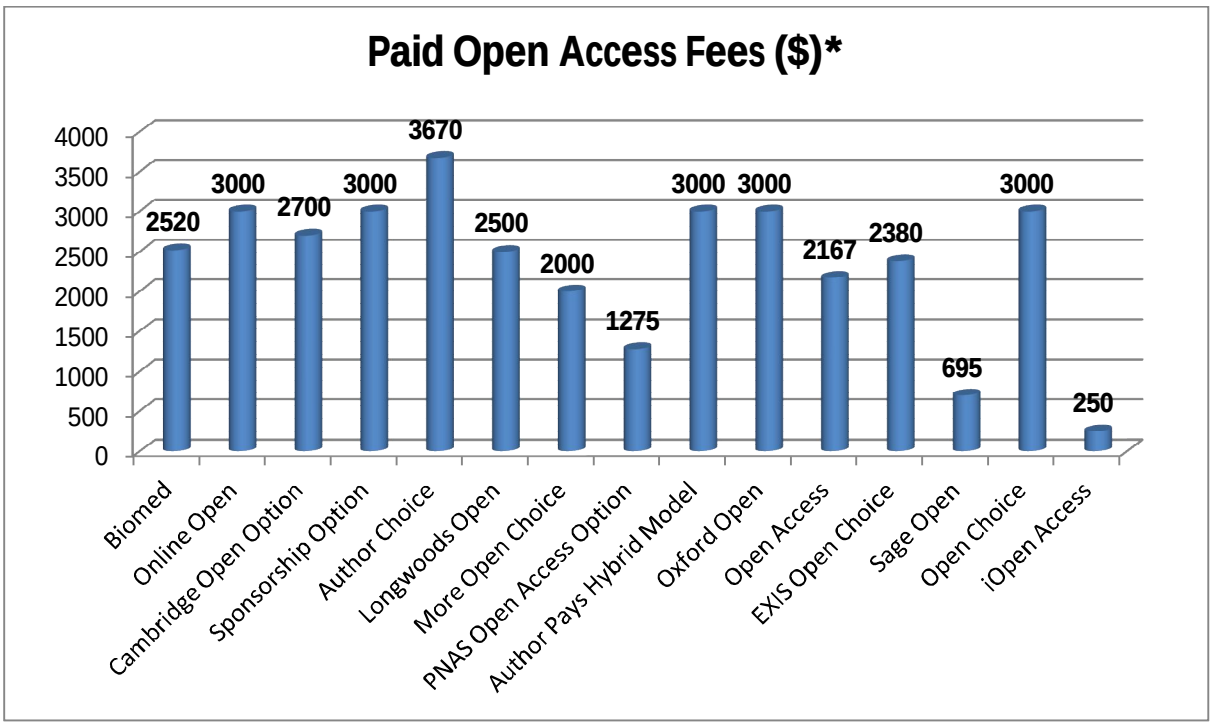

Fig. 4.10 Paid Open Access Fees*

*(*considering fee of Sciences Journals for Maney Publishing)*

Analysis

Table 4.4 provides the detail of the open access fees of paid open option of the publishers covered in the study. The open access fees mentioned in this table may have alternative names like have open access fees, article processing fees, publication fees or sponsorship fees. All these nomenclature are very relevant and in resonance with Open Access movement. It also indicates that in case of eleven of the publishers are charging a flat open access fee from the author or funding agencies to which author is affiliated. But in case of four publishers there

is variation in open access fee depending upon the name of the journals. In case of BioMed Central, the price ranges from $2520 to $575. Similarly in case of Oxford University Press, the price ranging is from $1500 to $3000. PLoS publishes seven peer-reviewed journals including PLoS Biology & PLoS Medicine-$2900PLoS ONE $1350PloS Genetics/PLoS Pathogens/PLoS Comutational/PLoS Biology/ PLoS Neglected Tropical-$2250. PLoS charges different price of different journals. Authors who are affiliated with one of their Institutional Members are eligible for a discount on this fee. Maney charges less in the field of humanities as compared to its sciences journals. In fig 4.8, the paid open access fee for humanities journals of Maney Publishing has been considered whereas in Fig 4.9, the fee of STM Journals of Maney Publishing has been considered. In the table above “regular fees” for Oxford University Press has been considered. The maximum number of publishers whose paid open access fees around $3000 are Springer, Oxford University Press, Nature, Elsevier, Wiley-Blackwell. It is very clear from the above table that the maximum fees for paid open access is charged by Karger i.e. $3,670 and minimum fees for paid open access is charged by Taylor & Francis i.e. $ 250. PNAS discounted for discounted open access fee of $950, compared to our regular fee of $1,275, to make the papers immediately free online. In case of Sage Open, they charge $195 introductory author acceptance fee (discounted from the regular price of $695).

Table 4.5 Paid Open Option & their Embargo period

Sr. No.	Name of the Publisher	Paid Option Name	Embargo Period
1.	BioMed Central	Biomed	6-12 months
2.	Wiley-Blackwell	Online Open	6 months
3.	Cambridge University Press	Cambridge Open Option	12 months
4.	Elsevier	Sponsorship Option	12 months
5.	Karger	Author Choice	12 months
6.	Longwoods Publishing	Longwoods Open	12 months
7.	Maney	More Open Choice	12 months
8.	National Academy of Science	PNAS Open Access Option	6 months
9.	Nature	Author Pays Hybrid Model	6 months
10.	Oxford University Press	Oxford Open	12 months for STM 24 Months for A&H
11.	PLoS	Open Access	No embargo period
12.	Royal Society Publishing	EXIS Open Choice	12 months for Biological Science 24 months for Physical Science
13.	Sage	Sage Open	12 months
14.	Springer	Open Choice	12 months
15.	Taylor & Francis	iOpen Access	12 months in STM

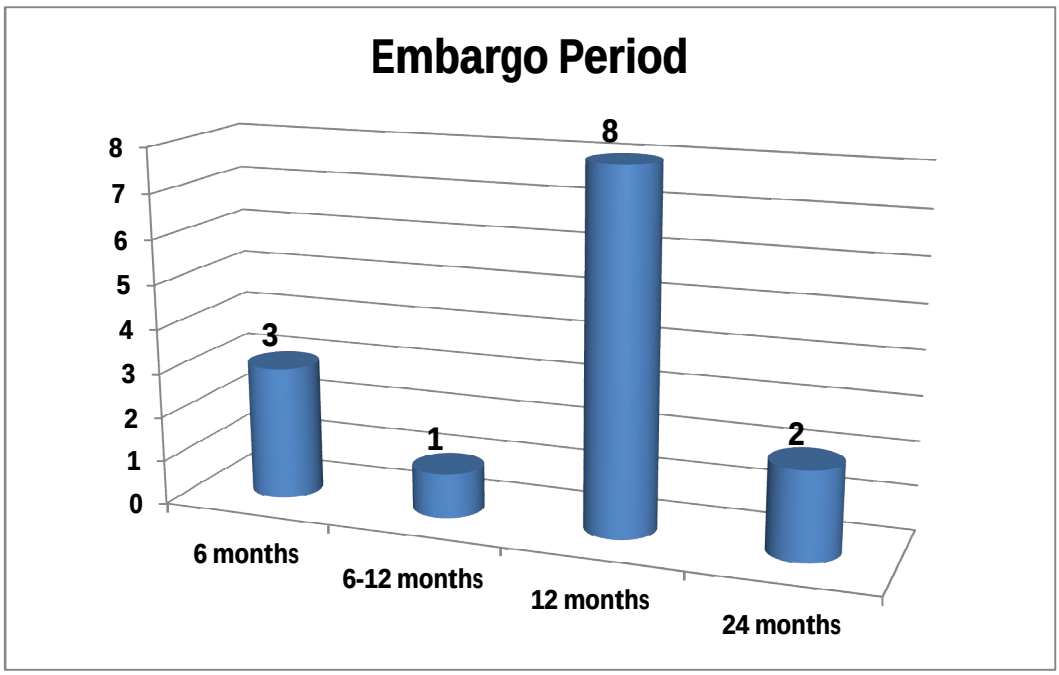

Fig 4.11 Paid Open Option & their Embargo period

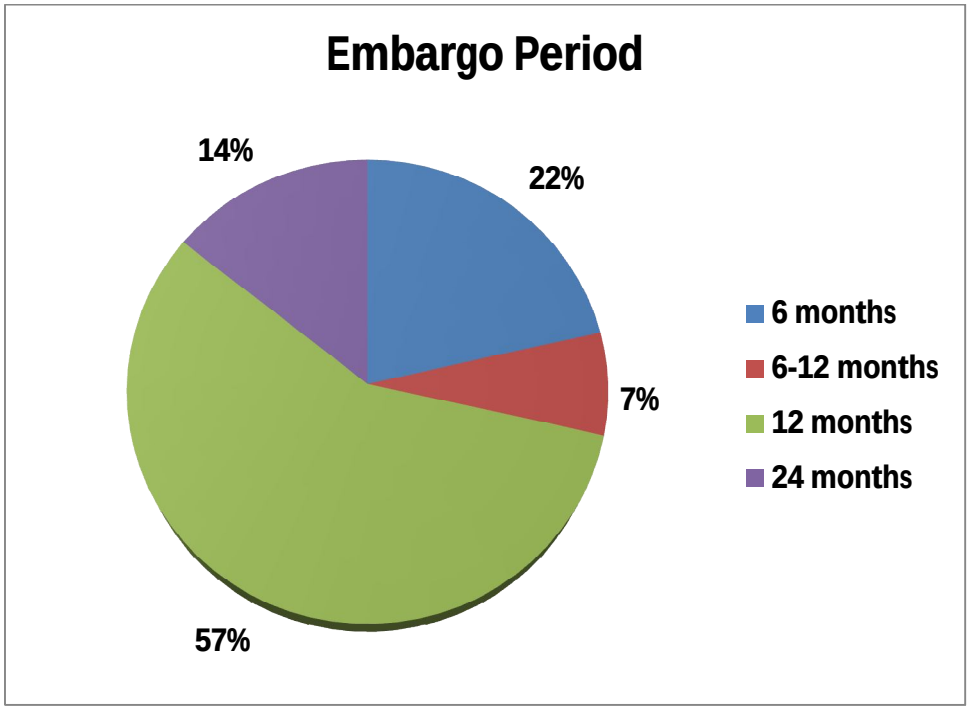

Fig 4.12 Paid Open Option & their Embargo period

Analysis

The table 4.5 above presents the embargo period of the paid open access of selected international publishers. The above table indicates that the embargo period of paid open option of different publishers ranges from the minimum of 6 months to a maximum of 24 months i.e. half year to two year. PLoS have no embargo period. The maximum number of publishers offer 12 months embargo period to their authors viz. Cambridge University Press, Elsevier, Karger, Longwoods Publishing, Maney, Sage , Springer , Taylor & Francis. Three publishers have six months embargo period viz. Wiley-Blackwell, National Academy of Science, Nature. In case of Royal Society Publishing, articles over 12 months old (biological sciences) and 24 months old (physical sciences) are freely available to all. The above table depicts that Oxford University Press have 12 months embargo period for science, technology & medicine journals and 24 months embargo period for arts & humanities journals. BioMed Central has 6-12 months embargo period especially in biomedical sciences.

FINDINGS, SUGGESTIONS & CONCLUSIONS

5.1 Major Findings

- United Kingdom (UK) has maximum number of publishers i.e. seven publishers viz. BioMed Central, Cambridge University Press, Maney, Nature, Oxford University Press, Royal Society Publishing, Taylor & Francis whereas United States (US) has 4 publishers viz. Wiley-Blackwell, National Academy of Science, PLoS, Sage.
- Canada also have one open access publisher i.e. Longwoods Publishing.

- All these publishers support paid open access method.
- Although the SHERPA/ROMEO indicates that their publishers which are contributing in the Open Access Movement through the provision of paid open access or sponsored open access. But the present study covers only fifteen prominent such open access publishers.
- Table 4.2 above indicates that most of the publishers having the provision of paid open access are commercial publishers that mean they provide subscription based access both in the printed & online form to the libraries worldwide.
- BioMed Central is solely & open access publisher.
- All of these publishers have given a brand name to their sponsored or paid open access service. For example, Wiley-Blackwell has Online Open, Karger has Author Choice, Sage has Sage Open, Springer has Open Choice, Maney has More Open Choice, Taylor & Francis has iOpen Access etc.
- All the cases of paid option are around ten year old as it started first in the year 2000.
- It is also visible from the above table that in the year 2005 most of the publishers' viz. Elsevier, National Academy of Science, Nature, Oxford University Press, Royal Society Publishing have started paid open access service.
- The earliest paid open publisher is BioMed & latest is Sage.
- All of these publishers provide paid open option in various subjects ie. STM (Science, Technology & Medicine), Humanities, Arts, Social Science, Business Transparent and Law.
- All of these publishers cover STM in its paid open option.

- Five of the publishers having paid open option in humanities and social sciences as whereas one publisher covers arts.
- The number of journals covered by these publishers in the paid open option ranges from a minimum of one journal published by National Academy of Science & maximum of 630 journals published by Sage. Eleven of the publishers are charging a flat open access fee from the author or funding agencies to which author is affiliated but in case of four publishers there is variation in open access fee for different journals published by them.
- The maximum number of publishers whose paid open access fees around $3000 are Springer, Oxford University Press, Nature, Elsevier, Wiley-Blackwell.
- The maximum fees for paid open access is charged by Karger i.e. $3,670 and minimum fees for paid open access is charged by Taylor & Francis i.e. $ 250.
- The embargo period of paid open option of different publishers ranges from the minimum of 6 months to a maximum of 24 months i.e. half year to two year.
- Three have six months embargo period. PLoS has no embargo period.
- The maximum number of publishers offer 12 months embargo period to their authors viz. Cambridge University Press, Elsevier, Karger, Longwoods Publishing, Maney, Sage , Springer , Taylor & Francis.
- In case of Royal Society Publishing, articles over 12 months old (biological sciences) and 24 months old (physical sciences) are freely available to all.

- The Oxford University Press have 12 months embargo period for science, technology & medicine journals and 24 months embargo period for 2 arts & humanities journals.
- BioMed Central has 6-12 months OF embargo period.

5.2. Suggestions:

- Commercial publishers earn huge profits from the subscriptions of their journals by the libraries all over the world. They should not charge any open access fee from the authors/parent organizations and contribute in the open access movement through 'corporate social responsibility'.
- As it is very clear from the findings that the open access fee is very high and is out of reach for the authors of the developing and least developed countries. The publishers should have discounted OA fee for these countries. It should be zero to minimum depending upon the economic status of the country.
- Indian publishers need to adopt the open-access philosophy for the electronic versions of their journals.
- Indian government should provide funds to Indian journals to support open access so that they can start a few OA journals.
- Indian R&D organizations, leading scientific research institutions (such as Indian Institute of Science, IITs, ISI, IISc, institutes under the CSIR (Council of Scientific & Industrial Research) and ICMR (Indian Council of Medical Research etc.) need to support authors by sponsoring paid OA fee.
- UGC, MHRD, AICTE should develop policy regarding funding of OA fee.

- NISCAIR, ICSSR, NASSDOC should also promote open access and fund the scholars /authors in the discipline of Social Sciences publishing under this model.
- Indian universities should also have some mechanism or provision to support the author financially in case he/she is willing to publish articles in paid OA journal.
- Financial support from external sources like private foundations, corporate funds, governmental and institutional grants should also be available to authors.
- Authors publishing in a paid OA journal should not be charged any OA fee /Article Processing Charge (APC) in case he/she has already published in that journal.
- In case the author is unable to mange funds from any funding body, waiver should be made available by the publisher depending upon the merit / academic value of the paper.
- The institution to which the author belongs should be given significant discount in case the journal is being subscribed (print) by the library.
- The publisher should allow the paid OA articles to be archived in the institutional repository (IR).
- The embargo period should be abolished if the author has already paid the OA fee/ APC.
- Libraries should make aware the authors of their organizations regarding the paid OA option as many of them are not aware of this model.

5.3. Conclusion:

Scholarly communication is the formal and informal processes by which the research and scholarship of faculty, researchers, and independent scholars are created, evaluated, edited, formatted, distributed, organized, and made accessible, archived, used & transformed. It must be supported so as to benefit the society as a whole. Open Access has proved to be the strongest solution to the crisis in scholarly communication. The role of paid open access also cannot be ignored as it is the initiative taken by commercial publishers.

Open Access is a very noble cause. Any noble cause must be given the shape of a movement. We are fortunate that the movement has already begun which imbibes both green route (self- archiving) & gold route (open access journals) of achieving open access.

During the study the researchers have from that there are many publishers who have started paid open access model. Though this is a very good initiative but the fees charged by them are too high & unaffordable especially for the author in developing or poor countries. Moreover the embargo period also dilutes the true merit of open access. Government all around the world should develop concrete open access policy & various higher educational institutes, funding bodies, corporate bodies should serve as a facilitator to this model open access. Money should not be the constraint for author to publish the research paper in a specific desire journal irrespective of its publishers.

A large number of open access developmental projects are underway with the active support of government funding agencies, learned societies and publishers to make the fruits of scientific progress equally available to all.

Knowledge should be made available to ALL AND SUNDRY at any cost, by any mechanism. This will ensure a knowledge society in true sense and make the world a better place to live in.

Abbreviations:

1. AICTE - All India Council for Technical Education
2. APC - Article Processing Charge
3. CSIR - Council of Scientific & Industrial Research
4. ICMR - Indian Council of Medical Research
5. ICSSR - The Indian Council of Social Science Research
6. IISc – Indian Institute of Science
7. IIT - Indian Institute of Technology
8. IR - Institutional Repository
9. ISI – Indian Statistical Institute
10. MHRD – Ministry of Human Resource & Development
11. NASSDOC - National Social Science Documentation Center
12. NISCAIR - National Institute for Science Communication and Information. Resources
13. OA –Open Access
14. PLoS – Public Library of Science
15. SHEPRA (Securing a Hybrid Environment for Research Preservation and Access) / ROMEO (Rights MEtadata for Open archiving)
16. STM – Science Technology & Medicine
17. UGC – University Grants Commission

REFERENCES

1. Butler, D. (2008). PLoS stays afloat with bulk publishing. *Nature*, 454(7200), 11. doi:10.1038/454011a
2. Gass, A. (2005). Paying to Free Science: Costs of Publication as Costs of Research. *Serials Review*, 31(2), 103-106. doi:10.1016/j.serrev.2005.03.008
3. Crawford, W. (2005). Open Access and Survivable Libraries. *EContent*, 28(6), 42. Retrieved from EBSCO*host*.
4. Beger, G. (2007). Der » Golden Road « zu Open Access. (German). *Zeitschrift für Bibliothekswesen und Bibliographie*, 54(4/5), 174-176. Retrieved from EBSCO*host*.
5. Wood, E. H. (2005). Open Access Publishing: Implications for Libraries. *Journal of Electronic Resources in Medical Libraries*, 2(2), 1-12. doi:10.1300/J383v02n02_01
6. Albanese, A. (2005). Cornell: Open Access Costly. *Library Journal*, 130(2), 19-20. Retrieved from EBSCO*host*.
7. King, D. W. (2010). An Approach to Open Access Author Payment. *D-Lib Magazine*, 16(3/4), 6. doi:10.1045/march2010-king
8. McLennan, J. (2009). SPARC Explores Income Models for Supporting Open-Access Journals. *Research Library Issues*, (266), 13-16. Retrieved from EBSCO*host*.
9. Bird, C. (2008). Oxford Journals' adventures in open access. *Learned Publishing*, 21(3), 200-208. doi:10.1087/095315108X288910

10. Cockerill, M. (2006). The economics of open access publishing. *Information Services & Use*, 26(2), 151-157. Retrieved from EBSCO*host*.
11. MPs look at open access. (2004). *Library & Information Update*, 3(6), 5. Retrieved from EBSCO*host*.
12. McCabe, M. J., & Snyder, C. M. (2005). Open Access and Academic Journal Quality. *American Economic Review*, 95(2), 453-458. Retrieved from EBSCO*host*.
13. Haddow, G. (2007). Open Access Pricing Models would Reduce Journal Expenditure at Most Colleges and Universities. *Evidence Based Library & Information Practice*, 2(4), 57-60. Retrieved from EBSCO*host*.
14. Papin-Ramcharan, J., & Dawe, R. A. (2006). The Other Side of the Coin for Open Access Publishing - A Developing Country View. *Libri: International Journal of Libraries & Information Services*, 56(1), 16-27. Retrieved from EBSCO*host*.
15. Guterman, L., & Labi, A. (2005). New Study Compares Open-Access and Traditional Publishing. *Chronicle of Higher Education*, 51(29), A18. Retrieved from EBSCO*host*.
16. SHERPA/RoMEO - Publishers with Paid Options for Open Access. (2011, November 2).*SHERPA*. Retrieved November 4, 2011, from http://www.sherpa.ac.uk/romeo/PaidOA.php?la=en
17. Wiley-Blackwell Author Services. (n.d.). *Wiley-Blackwell Author Services*. Retrieved May 20, 2011, from http://authorservices.wiley.com
18. Sponsor Option. (n.d.). *Open access mechanisms*. Retrieved May 13, 2011, from http://www.elsevier.com/wps/find/authors

19. Cambridge Open Option. (n.d.). *Cambridge Journal*. Retrieved May 22, 2011, from journals.cambridge.org/action/stream?pageId=4088&level=2&sessionI
20. Springer Open Choice. (n.d.).*Springer - International Publisher Science, Technology, Medicine*. Retrieved May 21, 2011, from http://www.springer.com/open+access/open+choice?SGWID=0-40359-0-0-0
21. Taylor & Francis Author Services - iOpenAccess & NIH policy. (n.d.). *Taylor & Francis Author Services - Taylor & Francis Author Services homepage*. Retrieved May 27, 2011, from http://journalauthors.tandf.co.uk
22. Open Access publishing. (n.d.).*Royal Society Publishing* . Retrieved May 28, 2011, from http://royalsocietypublishing.org
23. SAGE Open. (n.d.). *SAGE Open* . Retrieved May 29, 2011, from http://sgo.sagepub.com/
24. Oxford Journals | Oxford Open | Oxford Open. (n.d.). *Oxford Journals*. Retrieved May 25, 2011, from http://www.oxfordjournals.org/ox
25. PNAS Open Access Option. (n.d.). *Proceedings of the National Academy of Sciences* . Retrieved May 22, 2011, from http://www.pnas.org/site/subscriptions/open-access.shtml
26. Open Access: Nutrition. *Nature Publishing Group : science journals, jobs, and information*. Retrieved May 23, 2011, from http://www.nature.com/ejcn/open
27. BioMed . (n.d.). *The Open Access Publisher*. Retrieved May 20, 2011, from http://www.biomedcentral.com/

28. Embargo (academic publishing) - Wikipedia, the free encyclopedia. (n.d.).*Wikipedia, the free encyclopedia*. Retrieved May 21, 2011, from http://en.wikipedia.org/wiki/Emb
29. Open access - Wikipedia, the free encyclopedia. (n.d.).*Wikipedia, the free encyclopedia*. Retrieved May 21, 2011, from http://en.wikipedia.org/wiki/Open
30. Crisis and Revolution - Scholarly Communication - Library Collections - UC Berkeley. (n.d.). *The Library-University of California, Berkeley*. Retrieved June 2, 2011, from http://www.lib.berkeley.edu/Coll
31. Open access: implications for scholarly publishing and medical libraries. (n.d.).*National Center for Biotechnology Information*. Retrieved June 15, 2011, from http://www.ncbi.nlm.nih.gov/pm