E-journal Collection Development Prospects: The IIM Consortium Experience

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Tremendous developments in digital technologies in the recent years have given an astounding boost to electronic publishing worldwide. There has been a substantial increase in the production of electronic content, trade as well as scholarly material, over the past ten years. The proliferation of E-publishing across the world has brought in a revolution in scholarly publications. In the electronic scholarly publishing ecosystem, E-journals form one of the major stakeholders. E-journals are electronic equivalents of their print counterparts possessing many added features. E-journals extend numerous advantages to libraries and to the user community. They offer concurrent and multiple access to the content, remote access, multimedia facilities, online searching, and considerable storage savings. As a result of the above, libraries are now tempted to subscribe to numerous E-journals from a vast variety of publishers and providers. At the same time the library budgets are dwindling and hence librarians are prompted to work together for alternate strategies towards collection enrichment and sharing of resources. Fortunately now technology has several solutions to circumvent the situation. Consortium-based library subscriptions to E-journals and electronic full-text databases are picking up good momentum in India. This paper discusses the numerous features of E-journals in the present-day library collection development and digital content management context. It illustrates a vivid picture about the need for concerted and coordinated efforts on curbing the budgetary constraints and increasing the information resource base in the libraries. It traces the genesis of the IIM Library Consortium,

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a consortium of six IIM libraries in India, which took off as early as 2000, and narrates its journey through success over the years. The paper also highlights the host of issues and problems the consortium has been encountering and overcoming from time to time.

1 Introduction

The unprecedented penetration of electronic content presently in the libraries is amazing. Today, the library's electronic subscriptions include E-journals, E-books, scholarly databases (abstract, index and full-text), E-reference works, online E-book libraries, value added information portals, etc. Among these, E-journals form the major chunk of digital collections and they are growing at a phenomenal rate. E-journals are the electronic equivalents of their print counterparts and they possess numerous additional features. E-journals are often referred to interchangeably as "Electronic Serials", "Online Journals" and "Electronic Periodicals". Lancaster [1995] defines an E-journal as "a journal created for the electronic medium and available only in this medium". Electronic serials may be defined very broadly as any journal, magazine or newsletter which is available over the Internet [E-journal Miner].

2 Salient Features

With the backup of technology, E-journals are able to provide a number of features which attracts a wide user base and this has registered a notable increase in library subscriptions. Some of the salient functions and qualities of E-journals include :

➤ Online access (endless outreach capability)

➤ Concurrent access by multiple users

➤ Anytime, anywhere access and at a 24 X 7 X 365 formula

➤ Support for multi-point searching capabilities

➤ Unique features like hyperlinks to related items, reference linking, etc.

➤ Substantial saving in physical storage space

➤ Support for multimedia information

Influenced by the above advantages, libraries today subscribe to a growing number of Electronic Journals. The E-journal access process utilises a diverse set of technologies for uninterrupted and user-friendly information delivery and management.

3 Collection Development and Access Management

There is a great deal of difference between E-journal subscriptions and their print counterparts. For E-journals, a variety of subscriptions, access and pricing models are being practised. Libraries can subscribe to electronic journals from publishers or through vendors. Some companies (also known as aggregators) create collections of the entire journals and sell access to these collections. Online access to the E-journals could be arranged through User ID / Password or through IP authentication. There are a number of pricing models for electronic journals such as the online only, online and print, print and online, flip-pricing, pay-per-hit, pay-per-view, pay-per-download, pay-per-print, deeply discounted pricing, etc. Some of the other popular models include the FTE (Full Time Equivalence) based pricing", "core subscription plus pay-per-view", "usage-based pricing", "licensee membership fees", etc. Based on the nature of the subscription / licensing arrangements and the availability of funds a number of models can coexist in a practical library setting [Sreekumar, 2002]. It is observed that there is a wide range of difference in the pricing patterns and there is absolute absence of standard pricing policies for E-journals, and this is found across the entire spectrum of E-journals. Larger publishers tend to monopolise the market and libraries often become their prey, left with no alternatives.

4 E-journal Consortia

The emergent prompting for library consortium movements draws its strength from the vast outgrowth of E-journals across the world in almost every subject area, the fast growing technology push, the unprecedented and ever increasing demand pull, and the diminishing budget allocations being confronted by libraries. According to statistics, out of over 1,50,000 serials published the world over, more than 70,000 cover scholarly communications, and among these more than 20,000 titles are electronic journals and are accessible on the Internet. More than 2500 among these scholarly journals are free for all, which comprise a vast treasure of scholarly content from around the world [Goudar, 2004]. The situation prevailing in the current library scenario reveals that

it has reached a critical mass both in terms of digital collections as well as the number of users.

A library consortium is a collective activity of a group of libraries towards a common goal of sharing resources [Janakiraman, 2002]. With the availability of the state-of-the-art information technology solutions and the Web revolution, libraries are now better off in terms of easy access to more information through meaningful cooperation among themselves.

5 Consortia Benefits

The global library consortium experience unequivocally vouches that it is a win-win situation for all its stakeholders – users, publishers, and libraries – all alike. Users are the ultimate end beneficiaries of such initiatives. For publishers, the consortium offers reduced attrition, improved income stability, incremental revenue, and greater visibility of their products. Recently the concept of library resource sharing has been largely influenced by a variety of nation-wide techno-centric consortium approaches in pursuit of optimising the libraries' resource base while achieving substantial savings through combined and coordinated bargains with publishers.

For the participating libraries, the consortia offer several benefits which include access to otherwise unsubscribed materials, scope for electronic archives, availability and monitoring of usage statistics, getting deep discounts through joint pricing negotiations – hence lower unit cost of information, reduced storage costs, developing common resources databases, effective document delivery systems, a single interface and access point, enhanced search facilities, better scope for developing a union catalogue among participating libraries, etc.

6 Various Models of Consortia

According to a study conducted during 2004, various consortia models are practised in India and each of them have varied features [Arora, 2004]. Firstly, the 'Open Consortia', are open-ended and provides facility for the libraries to join and leave as they please. In this case, publishers define a minimum number of libraries for the consortium to take-off, at a specific rate per product. This type of consortia are generally driven by small homogeneous groups who have a need to cross-share the resources in a specific subject area. INDEST Consortium is an example

to this. The second category is the 'Closed Group Consortium', which stays exclusive with in a defined group. This type of consortia emerges either by coalition, affiliation and collaboration among them (CSIR, DAE, IIM Consortium). Here the formation and operation of the consortia guidelines and its administration are fairly simple and easy. There is another group of consortium called the 'Centrally Funded Model'. In this model, the very existence of the consortium will solely depend on the central funding agency. The strength of this model is that the financial responsibility of running the consortium is shouldered by the parent body. INDEST, UGC INFONET, CSIR, ICMR Consortia, etc. are examples of this model.

The next model is the 'Shared-budget Model', where the participating libraries take the lead and form the consortium. The IIM and FORSA consortia are examples of this model. The operational aspects of the consortium especially the management of funds are individually handled. Entering into an MoU for a better and strong footing is always recommended for this model. Next is a conceptual model called 'National Consortium', which is not being seriously attempted by any of the ongoing consortia in the country. There are some isolated efforts from UGC Infonet and INDEST in this regard, but they are still to make any significant strides. National level licensing of information products could be achieved towards this end. 'Publisher Initiative' is yet another model and India has seen publisher initiated consortia models too, coming up in the recent years. The Emerald Full-Text Library published by the Emerald Publishing Group (formerly MCB University Press) is an example of this. Here, the publisher offered a deep discounted consortium price to the participating libraries on a national level. The pre-condition was that there should not be any drop in their print subscriptions. It is hoped that several such initiatives will be coming up from the publishers' side in the near future.

7 Indian Scenario

India has been proactively responding to the library consortium movement for sometime. Presently, a number of institutions are immensely benefited by endorsing the consortium-based subscriptions. The largest academic library consortium is the UGC INFONET with a membership of 142 Universities. The largest science, engineering & technology consortium in the country is the INDEST, funded and fuelled by the

Ministry of Human Resource Development (MHRD), Government of India. INDEST has over 120 institutions participating in it. Others include the FORSA Consortium of the Astronomy & Astrophysics libraries, IIM, DAE, ICMR, CSIR, ISRO, Rajiv Gandhi University of Health Sciences, and the ICICI. A number of regionally focused and city level consortia are also slated to emerge, having been convinced of the success rates of the ongoing library consortia in the country.

8 The IIM Consortium

The year 2000 was a landmark in the history of IIMs, with the formation of the IIM Consortium at IIM Kozhikode. A pilot study conducted during 1999 revealed that more than 60 per cent of IIMs' electronic resources overlapped. The idea of the library consortium was mooted to the then Director of IIM Kozhikode who took the message to the IIM Directors' Forum for formal approval of the proposal. The objective was to ensure among the IIMs, optimum utilisation and enhancement of the resources, and to minimise the expenditure by consortia-based subscriptions to the commonly subscribed databases and journals. The idea was to approach publishers of Electronic Journals and CD-ROM Databases to begin with, as a consortium, for better pricing and services. The consortium meetings proved to be very productive and successful. The bottom line of the concept was thus collectively "to pay a little more and get a lot more", in its endeavours to build up a strong information resource base among all the IIMs. The additional burden while accessing all the electronic titles across the IIMs for the individual print subscriptions we had at each of our Institutes were shared equally by working out the license charges for the Enhanced Access License (EAL). During the first meeting itself, a host of journals and databases were jointly subscribed at very competitive prices, and a number of others promised supply of their products at a nominal cost.

Convinced of the dire need for a journals consortia, major publishers such as Elsevier, Kluwer, John Wiley, Blackwell, Taylor & Francis, and MCB University Press (Emerald Full-Text Intelligent Library) were approached and they all now participate in the Consortium. The end result has been highly praiseworthy. Over 1050 E-journals are directly sourced from publishers and over 12,500 E-journals' aggregated full-text the IIMs are able to get online access across all the institutes by paying a nominal additional amount.

The System Architecture of the IIM Library Consortium is illustrated in the following diagram (Fig. 1). Some of the information resources projected in the diagram now form part of the INDEST Consortium.
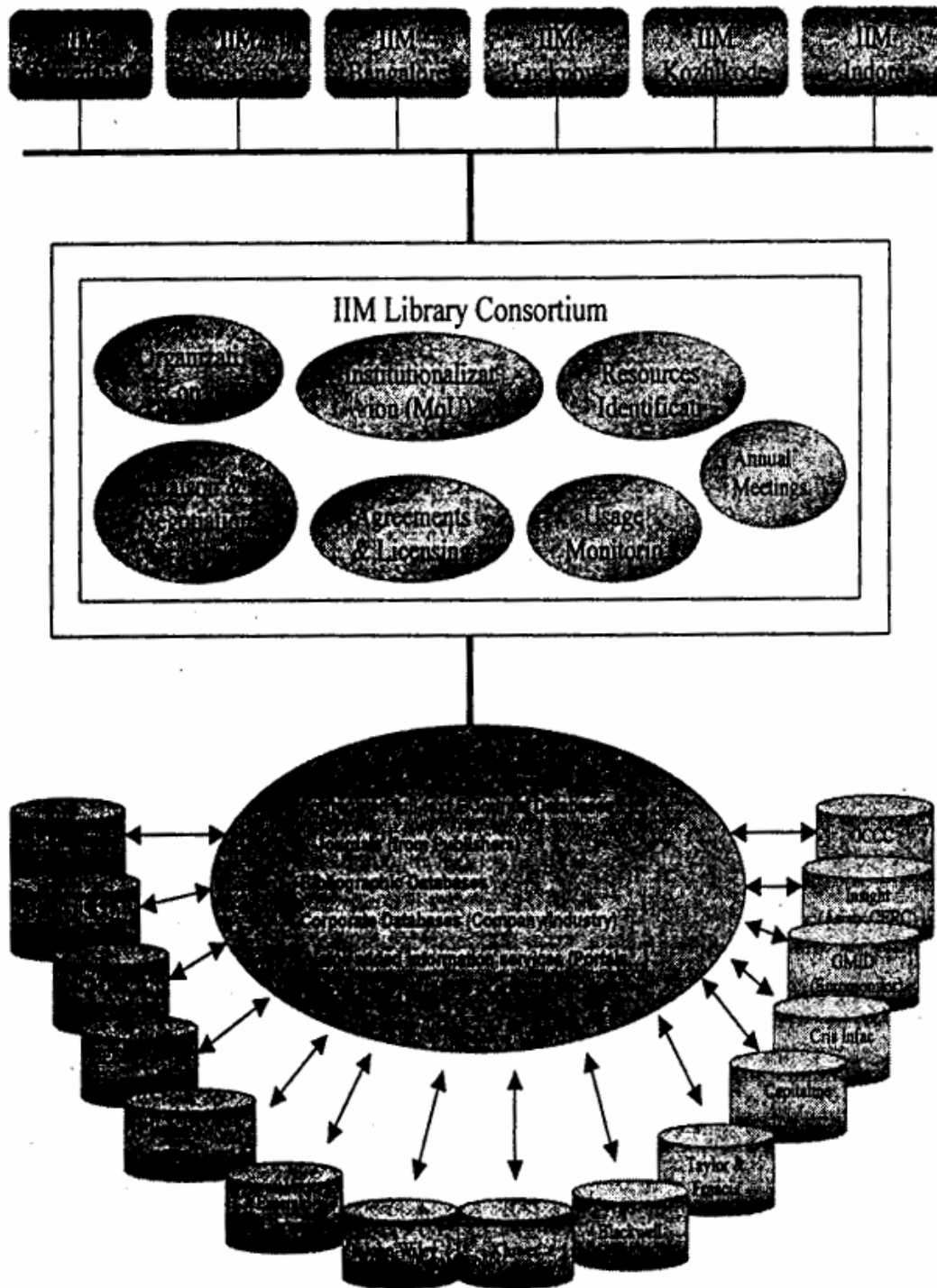

Fig. 1. Three-Tier Architecture of IIM Library Consortium

Consequent on the successful first meeting at IIM Kozhikode (2000), the Consortium has been meeting regularly in various campuses on rotation / turn basis. The second meeting took place at IIM Bangalore (2001), the third at IIM Kolkata (2002), the fourth at IIM Lucknow (2003). The fifth meeting was held at IIM Ahmedabad (2004). There has been an overwhelming response received from the publishers offering their products at substantially discounted prices. As a result, all the 6 IIMs have been subscribing to a host of databases and over thousands of E-journals. The E-journals set available at the IIM Consortium is illustrated in the following Table (Table 1.).

Table 1. E-journals Collection at IIM Consortium

Sl. No.	Name of E- journal/Publishers	Total Number of E-journals	Discount (%) Enjoyed by the Consortium
1.	ABI Inform Global (PROQUEST) *	3440	73.79
2.	ACM Digital Library *	30	**
3.	Blackwell Publishers	300	90
4.	Business Source Premier (EBSCO)*	8000	***
5.	Elsevier Science (Science Direct) *	260	85
6.	Emerald Full-Text *	150	85
7.	IEL (IEEE online) *	219	36.89
8.	Wiley Interscience (John Wiley)	32	90
9.	Kluwer Online	37	90
10.	Taylor & Francis	41	90
	Total	12509	

* Supported by INDEST Consortium since 2003
** List Price / Consortium Price available on request *** Not provided

The IIM Consortium places on record the immense help rendered by the INDEST Consortium since 2003. All the MHRD set up institutions such as the IISc., IITs, IIMs, NITs, RECs, IIITMs, NITIE, etc. are beneficiaries of this successful consortium. INDEST also has the distinction of being India's first Open Ended Consortium, facilitating institutions outside the MHRD family to join the INDEST, to take advantage of the consortium benefits. INDEST now extends substantial

help to the IIM Consortium by sponsoring most of the information resources. The management schools' Special Interest Group (SIG) comprise in addition to the IIMs, the management departments of the IITs, IITMs and NITIE.

There is substantial savings in the Consortium benefit out of the E-journals' consortia. Over the years, the dollar value equivalent of the vast treasure of the IIM Consortium's information resource base is estimated to be over US $ 15 million, which speaks volumes.

The library consortium gave the IIMs a head start in significantly enhancing their information resources in terms of access to a wide variety. of full-text electronic data / information. The publication types / content categories of IIM Consortium are the following :

- Aggregated full-text E-journal Databases;
- Online E-book Library;
- E-journals (directly sourced from publishers);
- Bibliographic Databases;
- Corporate Databases (Company / Industry / Statistics Databases);
- Value added information services (Portals, etc.)

The exponential growth of the E-journal collection in the IIMs, for instance, is illustrated in the following figure (Fig. 2).
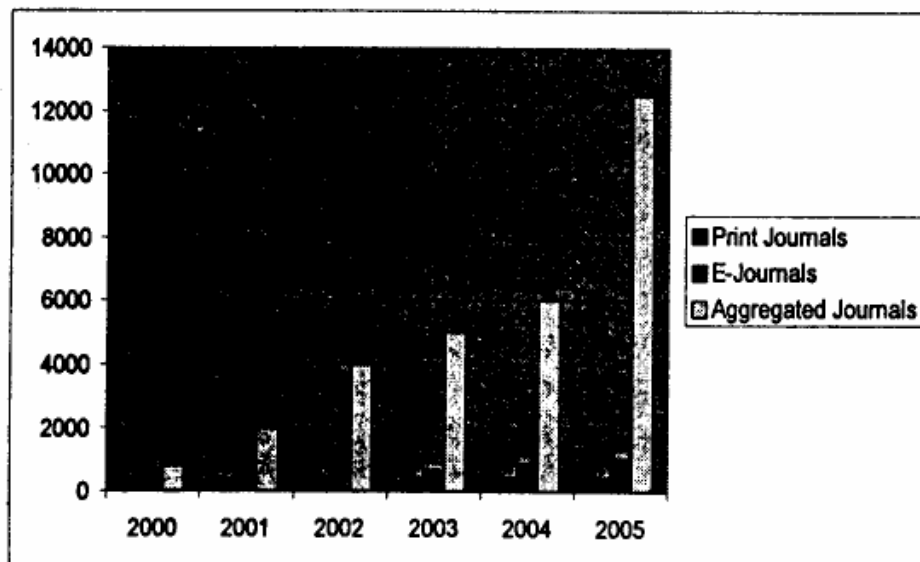

Fig.2. Growth of E-journals in IIMs : 2000-2005

9 Organisational Structure

The IIM Consortium is built on the strong footings of the collective responsibility of all the IIMs, backed up by the IIM Directors' Forum, and duly endorsed by the MHRD. One of the major milestones of this movement is the signing of the MoU between the IIMs in 2003 and thereby institutionalising the consortium activity.

10 Governance

The decentralised and participative management structure, coupled with the equity and shared responsibility entrusted upon the members bring in a great deal of self-regulation and smooth governance of the consortium. Resources identification and recommendations are done at the annual meetings of the IIM Consortium which are held every year. Necessary liaison and negotiations are done either during the consortium meet or arranged separately by one or more of the IIMs by taking others also into confidence. Arrangement of agreements and licensing of the information products are done at the librarians' level periodically. Usage monitoring and usability studies are conducted at regular intervals.

11 Major Issues Concerning Consortia

Library consortia creation is more easily said than done. The library consortium activity is a complex and complicated process involving the continued, like-minded, wholehearted support and concerted efforts of the librarians, their management and the publishers. They form an important inseparable trio in the new scholarly information environment. There are several issues relating to consortia like zeroing in and identifying the resources, uninterrupted online access, perpetual access to back issues, pricing, licensing, subscription payment, copyright and archival solutions, etc. Planning and implementing the right kind of IT infrastructure is yet another pressing issue.

i. Resources Identification

Identifying the most suitable product which is agreed upon by all the members of the consortium is more or less a difficult proposition. This is mostly because each member will have their own wish list of information products and services, though the overlap between the products will be on the higher side in the case of an ideal homogeneous group.

ii. Technology Infrastructure

Long range planning and sourcing of the appropriate IT and communication infrastructure conducive for proper delivery of information resources is a prerequisite for every participating library.

iii. Pricing Issues

As already discussed earlier, there are no standard practices or processes being followed by the majority of the publishers of scholarly literature and hence this is a grey area all together. In most cases the cost of journals are out of reach of many of our libraries and only a consortia approach could provide some meaningful practical solution. Publishers are invited for negotiations and asked to offer their best prices to the consortia. Several methods of pricing are followed, but what is important is that finally the price offered by the publisher should be economically viable for the participating libraries. And it should also ensure uninterrupted and perpetual access to the resources.

iv. Access-Related Issues

There are various access methods offered by publishers towards accessing their resources and it varies from case to case. Access authentication could be User ID / Password-based or IP-based which are popular among them. Uninterrupted and hassle-free access to the scholarly content is the ultimate objective of the consortium.

v. Licensing and Copyright Issues

As against the print paradigm, the E-journal subscriptions and access models allow only licensing of the content / product for a stipulated period of time which has several restrictions and bindings on the licensee. There are a number of issues which are under debate between librarians, users and publishers which need international attention and solution.

vi. Archival Issues

This is an area which needs utmost attention and unfortunately this is yet to be attended to by the consortia in India. Long-term preservation of the invaluable wealth of information being accumulated by the consortium is to be archived and preserved for posterity. As the technology is fast progressing and also getting obsolete almost at the

same pace, it is high time that these costly information resources are carefully archived and preserved on a long-tem basis.

vii. Sustainability Issues

Designing and launching a library consortium is perhaps the easier part when compared to its long-term sustenance and longevity. The management and the members of the consortium have to strive hard to formulate and establish robust models towards achieving the above goals.

viii. Usage and Usability Issues

The ROI (Return on Investment) of the consortium is measured in terms of the increased usage, usability of the costly information products which is ultimately reflected in the scientific productivity of the host institutes. It is the earnest efforts of the consortium, the management, the researchers and faculty and the librarians which determine the success or otherwise of any consortium.

12 Roadmap for the Future

Long-term preservation and archival of consortia resources are one of the major challenges faced by library consortia. Today, a vast majority of the information including scholarly contents are originated in digital form and their shelf life as well as their life cycle are a major concern for the library fraternity. Unfortunately, a handful of organisations have the necessary infrastructure to preserve digital information for the long-term. Presently the IIMs get only content access facility for the prescribed subscription period, which is usually done on a yearly basis, and the publishers provide access to the content, only for the period for which the subscription is arranged. The current situation is that the publishers keep changing their information access policies in tune with their changing business policies and technology capabilities. It is also observed that significant numbers of mergers and acquisitions occurred during the recent past and this also adds up to the concerns. Most of the publishers park their gigantic digital contents with third party server firms and there is no guarantee that the arrangement will last long.

The IIM Consortium therefore plans to archive its resources as a robust backup of the vast digital wealth. It will act as a central repository playing the role of an intellectual network nerve centre. Sourcing the content whether raw or otherwise along with structured metadata in XML format is very crucial for a meaningful resource discovery. Full-text

searching facilities capable of penetrating down to the paragraph level are prerequisites for an archive of this stature. Content migration strategies between different versions and platforms are serious considerations. Arriving at the access architecture is something which come up with ones own experience and hard work. Open source approach is recommended owing to its relative strength in the E-publishing ecosystem as against proprietary standards.

13 Conclusion

Needless to say, the library consortium activity is the rejuvenated new face of the traditional concept of library resource sharing. Libraries need drastic reengineering of their processes and procedures and should aggressively participate in consortium. As the consortium initiatives demand active involvement of the LIS professionals as well as the promoting / beneficiary institutions, it normally evolves and grows with hardships and bottlenecks. At times we find that the movement draws its strength even from its weaknesses, problems and from its own hard-learnt lessons. It is also to be noted that the E-journal subscription itself is a complex and complicated process, which adds up problems to the consortium activity in multiple ways. Naturally there will be a host of issues and problems that keep haunting libraries involved in consortia activities. By the same token and more importantly, the consortium approach brings in numerous benefits to the participating libraries - a steep increase in the resource base at a nominally higher investment burden; ensuring uninterrupted access to the array of E-journals; enabling perpetual access to the previously subscribed scholarly content for future; increasing the institutional intellectual capability and scientific productivity; opportunities for long-term preservation of scholarly materials through state-of-the-art archiving strategies; and above all, a tit-for-tat check and balance opportunity for libraries towards the monopoly and the upper hand being exercised by the commercial publishing community for long. Looking at the IIM experience, the consortium resources have brought in a face-lift in the resource base, the information utility and usability. The library consortium has been formally approved and institutionalised by the IIMs by signing of an MoU between them. It has been proved, over the five years, that these resources play a commendable role in considerably improving the academic output and increasing research productivity of the IIMs which is evidenced by their brand value across the world. The continued success

displayed by the IIM Consortium has been lauded by the INDEST Consortium by supporting a number of information resources for the IIM Consortium.

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