CHAPTER 1: INTRODUCTION

As global competition grows fierce, every organization continues to look for ways to increase their competitive edge without jeopardizing their profit margins. Every organization whether large or small, profit making or non-profit making have started to realizing that to stay current with technologies requires a great deal of efforts, risk and expenses. Hence, organizations need to take the benefits of the specialized services offered by the various vendors to reduced risk and expenses involved in such tasks/operations. It is primary reason for organizations to consider outsourcing as an attractive alternative. In outsourcing, an organization decides to allow an outside vendor/ organization/individual to take responsibility of some operation/functions of the organization.

The outsourcing vendors increase the efficiency and effectiveness of the organization operation, which would lead to increased production and output. The practice of taking the benefit of the specialized tasks has existed in the society from a long back because asking someone else to do something for you is as old as humanity. However, regardless of its origin, it is present today and is not likely to leave anytime soon.

In outsourcing, an organization decides to allow an outside vendor/ organization/ individual to take responsibility of some of the organization operations. An organization may choose to use outsourcing as a mean to increase the efficiency and effectiveness of organizational operations which would lead to increased production and output.

Until an organization goes through outsourcing evaluation it will never come to know whether outsourcing would be a good decision or not. “Outsourcing occurs anytime the organization elects to utilize outside independent workers to conduct work-related tasks. The how, what, where and when of the working conditions are driven by the needs of the organization and
may vary from assignment-to-assignment, day-to-day, and worker-to-worker (Nelson-Nesvig, 1998).”

As a management practice, it has probably been in existence for over 200 years, but during the last 20 years, with the support of academics, consultants and industry forums, it has developed into a popular strategic management initiative. Quinn stated, “Outsourcing is one of the greatest organizational and industry structure shifts of the century.”

1.1 CONCEPT

In simple words, outsourcing is delegating a task to an outsider (means a vendor/organization/individual). In simple words it is just a contracting transaction whereby one organization hires services from vendor while retaining ownership and responsibility for the underlying processes; the organizations clearly mention in the contract what they want and how they want the work performed by vendor.

The term Outsourcing is a combination of three terms “outside”, “resource”, “using”, which means going outside the organization to use the resources of others. Outsourcing is the strategic use of outside resources to perform certain tasks which are traditionally handled by internal staff using internal resources. Outsourcing is a strategy by which an organization contracts out some functions to specialized and efficient service providers/vendors.

Organizations have always been hiring contractors for particular types of work and form long-term relationships with those who had capabilities to supplement the organization resources. It is not a novel concept and has existed for decades, especially in the corporate sector as a means to reduce costs.

The official term ‘Outsourcing’ came with Ross Perot when he founded Electronic Data Systems (EDS) in 1962. EDS would tell a prospective client, "You are familiar with designing, manufacturing and selling furniture, but we're familiar with managing information technology. We can sell you the
information technology you need, and you pay us monthly for the service with a minimum commitment of two to ten years (Sharma, 2006).”

Various definitions attributed to outsourcing depending on the context in which they are used.

1.11 GENERATIONS

Outsourcing is a name for the old practice of Contracting Out which means some service or activity performed by persons or organizations that are not part of an organization. ‘Outsourcing,’ ‘Privatization,’ and ‘Contracting Out’ terms are often used interchangeably because each term reflects organization interaction with vendors in different aspects.

A variety of definitions associated with these terms are available in business literature. However, the important difference between outsourcing and privatization is that in privatization complete control over a service is transferred to vendor, whereas in outsourcing, the delivery of a service is transferred but control including governance and policy setting, is not transferred.

Paul Hoffert (1998) described “Outsourcing as having created a new mindset that focuses on talent-for-hire, reminiscent of the middle ages. In those days, trade people travelled from town to town, selling their crafts and services to a variety of clients. Today the talent-for-hire is just as likely to travel to the job virtually, as to travel physically, but the concept is still the same.”

Over the years, the meaning of the term 'Outsourcing' has undergone a sea change which has taken a new connotation in today's scenario. It is growing and moving from time to time through waves of specialization (outsourcing) globalization (offshoring), social networking (crowdsourcing) to cloud computing (cloudsourcing). Like many other long-lived phenomena, the concept and applications of outsourcing are continually evolving in both the corporate and public sector.
a) **FIRST GENERATION:** First generation of outsourcing was typically all about cost savings – finding someone who could do the same job better, faster, cheaper, or all three. However, service providers were interested in long term contracts and better margins. It covered the period from 1970 to 1990. 1st generation outsourcing characteristics included: mostly outsourcing of peripheral activities, cost savings, limited vendors, immature market, little integration and little focus on customer satisfaction.

b) **SECOND GENERATION:** Second generation outsourcing became strategic – with a much higher focus on core competencies and achieving objectives. It covered the period from 1990 to 2010. 2nd generation outsourcing characteristics included: near core and core activities are also outsourcing, multiple vendors, mature market, enhanced integration and major focus on organization’s performance.

c) **THIRD GENERATION:** Third generation outsourcing covers the period 2010 onwards. This generation of outsourcing varies from the past because it is totally based on cloud computing. 3rd generation outsourcing characteristics includes: outsourcing of core and non-core activities, multiple vendors, mature market, virtual integration and major focus on organizational goals.

### 1.12 DEFINITIONS

Unabridged edition of the Random House English Dictionary (1993) describes outsourcing as “the buying of parts of a product to be assembled elsewhere, as in purchasing cheap foreign parts rather than manufacturing them at home.”

Wagner (1992) stated “outsourcing is the transfer of an internal service or function to an outside vendor.”

James and Weidenbaum (1993) opined that, “outsourcing is not a new concept; it is simply another name for the long standing practice of subcontracting production activities.”
Falconi (1995) defined Outsourcing “as a fancy term for having someone else to do your work.”

According to Peter Drucker (1995) in outsourcing a "company, a hospital, or a government agency turning over an entire activity to an independent firm that specializes in that kind of work . . . further he explain “organizations may have outsourced all work that is `support' rather than `revenue producing' and all activities that do not offer career opportunities into senior management. This will mean that in many organizations a majority of people working might not be employees of that organization but employees of an outsourcing contractor.”

Drucker’s forecasts seems to be true to a great extent as worldover most of the public enterprises whether it may be industry, companies, hospitals, educational institutes etc. all are depending on outsourcing to accomplish their various tasks.

Rothery and Robertson (1995) stated that outsourcing means “finding new suppliers and new ways to secure the delivery of raw materials, goods, components and services (it means that you) use the knowledge, experience and creativity of new suppliers which you did not use previously. It is a mechanism for acquiring new dialogue, ideas; creativity of new suppliers may have more freedom to get things done, to do them better and cheaper and to give more customer satisfaction.”

According to Boss (1998) outsourcing means “the contracting of activities to an outside individual or organization (which may be another publicly funded body) in place of the use of in-house staff.”

Greaver (1998) defined “Outsourcing is the act of transferring some of a company’s recurring internal activities and decision rights to outside providers, as set forth in a contract.”

Lankford and Parsa (1999) defined Outsourcing as “the procurement of products or services from sources that are external to the organization.”
According to McCarthy and Anagnostou (2004) outsourcing “not only consists of purchasing products or services from external sources, but also transfers the responsibility for business functions and often the associated knowledge (tacit and codified) to the external organization.”

Wyk (2005) opined that “Outsourcing can be described as the practice of turning-over responsibility of some to all an organization’s information, systems applications and operations to an outside firm.”


According to Horngren, Charles T. et al. (2009) “Outsourcing is the process of purchasing goods and services from outside vendors rather than producing the same goods or services within the organization, which is called in sourcing.”

These definitions have in common that outsourcing refers to acquire determined activities from an external organization with a strong strategically and long-termed focus. Simply we can say that the term “outsourcing” refers to the contracting out the outside vendor/organization/individual to perform certain tasks and functions for the organization.

Thus, outsourcing is best defined as “a strategic decision that entails the external contracting of determined non-strategic activities or business processes necessary for the manufacture of goods or the provision of services by means of agreements or contracts with higher capability firms to undertake those activities or business processes, with the aim of improving competitive advantage (Espino-Rodriguez and Padron-Robaina, 2006).”

This definition includes three significant characteristics: First, it stated that outsourcing has to be a strategic and long-run decision. It becomes a part of the firm’s strategy with the aim of the pursuit and maintenance of competitive advantage. Second, it argues that firms must be able to identify
which activities or business processes can be outsourced and which vendor are capable to supplement firm’s resources. Third, it comprises the concept of competitive advantage.

1.13 TYPES

Outsourcing is becoming more and more popular in today’s environment. Most of the profitable as well as non-profitable organizations tend to outsource most of their work functions. It is a process in which an organization contract to another organization to avail particular services. Based on the nature of the work being outsourced, outsourcing can be divided into following types:

a) **CO-SOURCING**: is that outsourcing project in which vendor’s payment is based on achieving a particular goals/ project objectives successfully. Organization expectations include cost savings and access to expertise on demand. Vendor offerings include labor arbitrage, project management expertise and expertise on specialized technologies.

b) **BACK SOURCING/IN-SOURCING**: when technology is getting cheaper organization bringing back in-house a function that has been outsourced earlier because it could be more beneficial to run that operation internally. This usually occurs when technology is getting cheaper and it is beneficial to run that function/ application internally.

c) **MULTI-SOURCING OUTSOURCING**: is a strategy in which an organization buys different kinds of products from the same vendor or multiple vendors. Each vendor is having a direct contractual relationship with the organization. This is to be distinguished from the traditional single supplier concept. By working with one or more vendors simultaneously, the organization is aiming to achieve a significant improvement in business performance rather than short-term costs saving.

d) **SELECTIVE OUTSOURCING**: involves the outsourcing of a particular part/ specific applications of activity and performing the rest of the activity in-house. It is flexible and less risky because most of work is performed by the
internal staff of the organization. Generally it is more popular than total outsourcing.

e) **SHARED OUTSOURCING:** When a vendor works for more than one organization at the same time e.g. a software vendor working on the same computer software code for several banks because all banks require the same type of software for their work.

f) **TOTAL/ FULL OUTSOURCING:** When an organization closing a particular department and transferring all functions of that department to the vendor e.g. when organization closes down its maintenance department and outsource it to vendor.

g) **TEMPORARY OUTSOURCING:** This type of outsourcing is adopted as a rapid and short term solution for a particular problem. When organizations find themselves in a situation where rapid changes are taking place and they cannot afford to lock themselves into a long-term, inflexible arrangement with a vendor.

h) **BUSINESS PROCESS OUTSOURCING:** BPO is a form of outsourcing that involves the contracting of the operations and responsibilities of specific business functions (or processes) to a third-party service provider/vendor. In BPO a particular /entire process or task is transferred to another department within a organization or to outside vendor. The Entire function, assets and staff are transferred to the vendor/ external service provider. This commonly includes helpdesk, call centers, document processing and storage, payroll and internal auditing. However, this is not only limited to ICT but also to the business process which is supported by ICT.

i) **BUSINESS TRANSFORMATION OUTSOURCING:** It is an extension of Business Process Outsourcing (BPO). BTO typically focuses on helping the client firm to create a new infrastructure or business model. Business Transformation Outsourcing aims to maximize the benefits of outsourcing, transforming the business and improving performance.
j) **Knowledge Process Outsourcing (KPO):** A more sophisticated level of outsourcing relative to BPO is Knowledge Process Outsourcing (KPO). This involves advanced research, analytical and technical skills which means that service providers/vendors are expected to work independently. It is also important to note that in BPO, all processes are still laid out by the client whereas KPO specialists are given managerial control. Examples of KPO are pharmaceutical research and development, patent/intellectual property research, animation and simulation. Data research and analysis, legal services, content writing and development and database development services. KPO industry is less old and mature than the BPO sector e.g. Frank Morse, a republican senator, in Portland, Oregon, USA outsourced his speech on ‘The Impact of Globalisation on Oregon Economy’ to Brickwork India an outsourcing service provider in Bangalore in $500 (Tejaswi, 2006).

k) **Nearshore Outsourcing:** Nearshore outsourcing is the practice of transferring the work or services to the people of neighboring countries which are geographically near to the organization home country. Geographically near means that travel and communications are easier and less expensive. Because organizations do not want to deal with the cultural, language or time zone differences which involved in offshoring outsourcing. All the nearshore outsourcing organizations often share a border with their countries e.g. India outsourcing to China.

l) **Offshore Outsourcing:** Offshore outsourcing is another type of BPO. In offshoring outsourcing an organization transferred its IT-related work to other countries or others areas of the world where there is both political stability and lower labor costs or tax savings. e.g USA and other developed countries transferred their IT related tasks to developing countries of the world like India, China, Malaysia etc.

m) **Net-Sourcing:** Outsourcing applications that run on the Web. Since the browser provides universal access to Web content and applications, an application can run on a third-party Web server as easily as it can on an internal Web server (Intranet) (pcmag.com). Netsourcing allows customers to
receive business applications as a service rather than purchase software directly from an independent software vendor (ISV). Customers may use net-sourcing to access ISV applications such as personal productivity tools from Microsoft Office, e-mail/collaboration tools such as Microsoft Exchange, Lotus Notes, Netscape Messenger etc. Customers typically pay for the service with an installation fee and a monthly subscription fee based on number of users, number of transactions or percentage of the value of the transactions.

n) **TRANSMISSATIONAL OUTSOURCING:** Organizations are using transitional outsourcing to introduce major changes such as moving from one technological platform to another. It consists of three phases: management of the legacy system; transition to the new platform or system; and stabilization and management of the new platform. It is usual that management of legacy system is outsourced to allow internal IT stuff to focus on new technology and develop skills.

o) **TRANSFORMATIONAL OUTSOURCING:** Transformational outsourcing means using outsourcing to achieve a rapid, sustainable, step-change improvement in organization performance. It often requires when organization wanted to implement the new technologies to reengineer business processes and operations.

p) **VALUE-ADDED OUTSOURCING:** An aspect of strategic sourcing or multi-sourcing, in which some functional area is turned over to a service provider. The presumption is that the service provider can add value to the activity that wouldn't be cost-effective if provided by internal staff (SOURCINGmag.com).

q) **CROWDSOURCING:** When organizations outsource their work/functions/problems to hundreds or thousands of individuals and organizations and ask all of them to come up with appropriate solutions, and the best solution of all can be picked up then it is called crowdsourcing. This means allocating work to a defined organizational entity is called outsourcing whereas allocating work to unorganized, undefined individuals is called crowdsourcing.
Crowdsourcing is the act of outsourcing tasks, traditionally performed by staff or a contractor, to an undefined large group of people or crowd.

r) **Cloudsourcing**: Cloudsourcing is the combination of Cloud Computing and Outsourcing. Cloudsourcing is a general term for anything that involves delivering hosted services and IT resources over the Internet, as opposed to hosting and operating those services and resources locally, such as on a college or university network. According to Wikibin, “Cloudsourcing refers to sourcing complete solutions to run a business from the public cloud. The solution provider that offers Cloud sourcing products or services are called ‘Cloudsourcer’. The Cloudsourcer typically provides solutions that knit together cloud applications, cloud platforms and cloud infrastructure.”

**1.14 International Scenario**

Many corporations, government, public and private institutions are taking advantage of the low cost services available outside the walls of the organization. Regardless of the political, personal and economic backlash surrounding outsourcing is happening and rapidly expanding across globe. In turn, every sector of the society has opened its doors to outsourcing to make it an integral component of the organization. Outsourcing was not formally identified as a business strategy until 1989 (Mullin, 1996). Duke University CIBER/ Archstone Consulting study (2005) reported that 73% of Fortune 2000 (Annual List of largest Industrial Corporations of USA) companies said offshoring (another term used for outsourcing) was an important part of their overall growth strategy (Chillibreeze Report, 2006). However, now outsourcing is one of the most prominently used business strategy in the world (Handfield, 2006).

Currently, outsourcing of services within the cyber age refers to a wide range of services such as: Advertising and Broadcasting, Auditing, Business Process Outsourcing, Call Center Services, Data Entry, E-governance Services, Financial Management, Graphic Design, Healthcare Services, Human Resource Management, IT Infrastructure, IT Management and Administration,
IT Programming, IT Software and Hardware, IT Support Services, Knowledge Processing, Pharmaceutical Research Services, Presentation and Multimedia, Research and Development, Transcription Services, Translation Services, Web Analytical Services, Web Site Design and Marketing, Workforce Planning and many more, the list is endless (Brown and Wilson, 2005).

‘Outsourcing’ has been one of the hot topics over the past couple of years throughout the literature in newspapers, magazines and speeches of the world leaders including developed countries viz. president of US. Even as talks of outsourcing centered on recent ban by Ohio State, India remains at the top and most preferred outsourcing destinations by large private U.S Corporations.

According to survey of 300 senior executives from Fortune 1000 companies released by Cap Gemini (IT Services and Business Consultancy Company) in partnership with Harris International, India has over 60 percent of the outsourcing market share in U.S. China comes 2\textsuperscript{nd} with overall market share of 27 percent, while Latin America is close to its heels at 25 percent (Prabhudesai, 2010). In a 2011 survey, 85\% of Wall Street economists agreed that outsourcing has had a positive effect on the overall economy of the U.S (Mukherjee, 2012).

In order to improve the present economic conditions of U.S, President Mr. Barack Obama said, “Let's stop giving tax breaks to companies that are shipping jobs overseas. Let us stop incentivizing that and let us give tax breaks to companies that are investing right here in the U.S.A. (Jha, 2010).

It might sound quite ironical, considering the amount of anti-outsourcing rhetoric raised across the US and UK. However, in 2005 the UK government outsourced its pre and post election related work and in 2006 a republican senator, Frank Morse from USA outsourced its speech writing work to Bangalore, India. The real fact is that, the waves of outsourcing had been hitting the political power corridors of these dominating economies in the world (Tejaswi, 2006).
Gartner (World's Leading Information Technology Research and Advisory Company) (2004) estimated that one out of every four high technology jobs in developed nations would be outsourced to emerging markets such as India by 2010 (Schneiderman, 2004). The Indian IT/ITES (Information Technology Enabled Services) industries are having more than 50% of Global ITES offshoring market share (Purohit, 2010). The developing countries which provide the low cost services are spreading well like India, China and Malaysia etc. But India remains the undisputed outsourcing service provider from 2004 to 2012. However, Russia and China are emerging as strong contenders while other countries aim to stake a claim as well. Gautam (2010) said very rightly that “No matter what Barack Obama might say, it is certainly not possible to kill outsourcing. It has and will continue to take place, after all which company would not like to see their profits soar.”

1.14.1 Top Outsourcing Service Providers

Most of the developed countries outsourced the various tasks to the developing countries to get the better service/products at cheaper rates. The various reports published during 2004 to 2011 reported that countries of the Asia Pacific Region lead the worldover in outsourcing services provider. In this region India is the top among the outsourcing service provider countries of the world. The famous reports and the ranking of the top outsourcing services provider countries are given below:

Dolan (2004) reported that Forbes Magazine released the list of the top ten countries for offshoring and cited the following countries according to their rank: India, China, Malaysia, Czech Republic, Singapore, Philippines, Brazil, Canada, Chile and Poland.

Minevich Mark and Horasis (2005) examined the risk and cost profile of the world’s leading outsourcing destinations and proposed two different indexes—Current Global Opportunity Index (GOI) and the Future Opportunity Index (FOI). According to this report the top ten outsourcing countries of 2005 were: India, China, Costa Rica, Czech Republic, Hungary, Canada, Latvia,
Russia, Chile and Romania. They also predicted the future top ten outsourcing countries for the year 2015 which are: China, India, USA, Brazil, Russia, Ukraine, Romania, Belarus, Philippines and Canada.

Chillibreeze Software Private Limited Report (2006) mentioned the top ten outsourcing destination of the world. The rank wise list includes: India, China, Malaysia, Philippines, Hungary, Czech Republic, Russia South, Africa, Mexico and Poland.

A.T. Kearney Global Management Consulting Firm (2007) analyzed and ranks the top 50 offshoring locations worldwide that provide the most common remote functions including IT services and support, contact centers and back-office support. The ranking of each country was based on 43 measurements which are grouped into the three categories: financial attractiveness, people and skills availability and business environment. Top ten offshoring destinations included: India, China, Malaysia, Thailand, Brazil, Indonesia, Chile, Philippines, Bulgaria and Mexico.

Marriott (2008) reported that Gartner (an Information Technology Research and Advisory Firm) listed the top 10 countries for offshore services according to their 10 criteria. The 10 criteria were: language, government support, labor pool, infrastructure, educational system, cost, political and economic environment, cultural compatibility, global and legal maturity, and data and intellectual property security and privacy. The 10 criteria help the organizations to decide which outsourcing locations are right for them. Top ten outsourcing destinations included: India, China, Australia, New Zealand, Singapore, Malaysia, Pakistan, Philippines, Thailand and Vietnam.

A.T. Kearney Global Management Consulting Firm (2009) mentioned the ranking of the top offshore countries of the world based on the same criteria as the year 2007. Top countries based on the ranking were: India, China, Malaysia, Thailand, Indonesia, Egypt, Philippines, Chile, Jordon and Vietnam.

Gartner Incorporation (an Information Technology Research and Advisory Firm) (2010) listed top ten outsourcing destinations: India, China,
Australia, New Zealand, Singapore, Malaysia, Indonesia, Philippines, Thailand and Vietnam.

A.T. Kearney Global Management Consulting Firm (2011) listed the top offshoring destination based on its earlier criteria which includes India, China, Malaysia, Egypt, Indonesia, Mexico, Thailand, Vietnam, Philippines and Chile.

SourcingLine.com (2012) has compiled the list of the top ten outsourcing countries which includes India, Indonesia, Estonia, Singapore, China, Bulgaria, Philippines, Thailand, Lithuania and Malaysia.

On the basis of above sources the consolidated list of top 10 most preferred outsourcing service provider countries in the world during last five year 2008-2012 given in Table 1.1. India still remains the number one outsourcing services provider country from 2004-2012.

This is not only because India pioneered the business practice, but it is due to its human capital and infrastructure. As long as India maintains this, it will remain the number one destination for outsourcing (Mukherjee, 2012).

**Table 1.1: Top Ten Outsourcing Service Provided Countries in the World**

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<thead>
<tr>
<th>Year/Rank</th>
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<td>1.</td>
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<td>9.</td>
<td>LITHUANIA</td>
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<td>10.</td>
<td>MALAYSIA</td>
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</table>
1.15 **National Scenario**

The outsourcing history of India is one of phenomenal growth in a very short span of time. The ICT industry in India has existed since the early 1980s, it was the early and mid 1990s that saw the emergence of outsourcing. Outsourcing of ICT services to developing countries commenced in the early 1990s when US corporations began outsourcing services to India. US companies found that programmers in India could perform the work with the necessary skills and the process was far less expensive than in the USA.

The factor like availability of technically trained and skilled manpower, low labor costs, the large English speaking population; an appropriate ICT environment and a time zone difference, convenient for developed countries to outsource work in India. In fact at one time the cost advantage of offshoring work to India was 1:6, i.e. a company saved as much as 60% on labour and other charges (Rose India Technologies Pvt. Ltd). Various studies and surveys point out that about 50% to 75% of all Fortune-500 companies are already outsourcing to India and this trend is only likely to rise.

The ICT sector is regarded as one of the most competitive sectors in India. Signs of the dramatic impact that the outsourcing industry has had in India can clearly be observed in India. This is proved by the fact that the Top 8 Global Outsourcing Cities in the world includes six Indian cities led by Bangalore (Global Services Media, 2009).

NASSCOM, (National Association of Software & Service Companies) the apex body of India's premier IT software and service (IT & BPO) companies, reported that India's share in the global outsourcing market rose from 51% in 2009 to 55% in 2010. NASSCOM predicted that India would emerge as a global hub for knowledge services by 2015 ([http://www.outsource2india.com](http://www.outsource2india.com)). The NASSCOM prediction seems to be true to a great extent because as per the various reports India is the top preferred outsourcing destination in the world.
IAOP (International Association of Outsourcing Professionals) has released a list of the top outsourcing service provider companies of the world “2012 The Global Outsourcing 100”. The ranking of these companies is based on various Outsourcing parameters, which include Customer References, Demonstrated Competencies, Balanced performance, Management Capabilities and Size & Growth. Twelve Indian companies are included in this list. There were three Indian companies in the top 10 with ranking Infosys Technologies (2nd), Wipro Technologies (3rd) and HCL Technologies (7th) (Press Trust of India, 2012).

Outsourcing has also benefited India from a developmental perspective. Because India succeeded in developing its ability to provide outsourcing skills that requires increasing technological expertise. This trend is associated with improved remuneration levels, which could assist in narrowing the income gap between developed and developing world.

1.2 OUTSOURCING IN LIBRARIES

Outsourcing is a phenomenon that is sweeping diligence and equally affecting economy of all sectors: Private, Public and Academic. Libraries are not immune to this trend. The term “Outsourcing” may be somewhat new to the vocabulary of Indian librarianship but its practice in libraries is not. For many years, librarians have used outsourcing as a viable way to accomplish many and varied tasks e.g. janitorial services and bookbinding are the tasks better done by companies formed to perform such services.

Library networks and consortia are also seen as ways to outsource and these are the examples of acceptable outsourcing. In an environment of freezing/ shrinking budgets and an increasing demand for more information by library users, many libraries outsource some of their services and functions to vendors. It is regarded as a solution to financing and staffing problems. Hence, outsourcing has become a strategic tool in library management.
1.21 DEFINITIONS

Outsourcing is a new name for the old practice of “contracting out” for services that organizations choose not to provide internally with their own staff. Benaud and Bordeianu (1998) said that ‘definitions of outsourcing reflect two decades of evolution- some might call it a revolution of the outsourcing trend. In the 1970s, outsourcing simply involved a supplier managing and operating a function formerly carried out in-house. During the 1980s outsourcing evolved towards closer collaboration between two companies; in the 1990s the trend is toward fuller partnership. A similar trend is apparent in the world of libraries.’

The terms ‘Outsourcing,’ ‘Privatization,’ and ‘Contracting Out’ are often used interchangeably because each term reflects library’s interaction with vendors in different aspects. A variety of definitions associated with these terms are available in literature.

Shirk (1994) opined that outsourcing is “the purchasing, from an outside source, of goods and services that an organization previously produced or provided for itself.”

Arnold and Winters (1996) described outsourcing as “the procurement of services from an outside vendor to perform functions that are not core to the mission of the library and for which the library is unable or uninterested in providing for itself.”

Dunkle (1996) compared outsourcing activities in the library and business worlds and suggested that outsourcing is “accessing expertise and resources from an external organization to supplement or take full responsibility for a function that was previously accomplished in-house.

Marcum (1998) stated that outsourcing of library services means “contracting with a third party for a service formerly done internally.”

Richard Abel (1998) defined outsourcing as “simply the contracting out of a variety of ‘backroom’ functions to suppliers in the private sector.”
Baker (1998) stated that outsourcing is “a method employed by an organization to hire or contract with an outside individual, vendor, or agency to perform an operation or process rather than using in-house staff to do the same work.”

ALA Outsourcing Task Force’s Report (1999) defines “Outsourcing is the contracting to external companies or organizations, functions that would otherwise be performed by library employees.” Further ALA Outsourcing Task Force (1999) reported that “Privatization is the shifting of library service from the public to the private sector through transference of library management and/or assets from a government agency to a commercial company” and “Outsourcing involves transfer to a third-party, or outside vendor, or contractor, or independent workers, or provider to perform certain work-related tasks involving recurring internal activities that are not core to the mission of the library.”

According to Black (1993) Privatization is a contract as “an agreement between two or more persons which creates an obligation to do or not to do a particular thing.”

However, the significant difference between outsourcing and privatization is that in privatization complete control over the activity and service is transferred to vendor whereas in outsourcing the only delivery of the activity and service is transferred and not the control.

Dartmouth Public Libraries Privatization/Outsourcing Report (2008) defines “Outsourcing is the contracting out of functions that would be otherwise performed by library employees either because they choose not to perform the function or do not have the ability to provide what is needed.”

CCLA Technical Services Standing Committee (2008-09) stated that outsourcing is “paying a library vendor an additional fee to perform certain tasks to the materials purchased by the library. These tasks are normally performed by the library staff once the materials are received and
before they are placed in the library for use. Instead, the vendor has personnel who do these functions before they are shipped to the library.”

Thus we can say that no matter what is the definition, outsourcing has become a common practice in both the corporate as well as non-corporate sector. It is a susceptible issue but there is considerable evidence from around the world that it has both opportunities and challenges for library and information professionals.

1.22 INTERNATIONAL SCENARIO

Outsourcing is not a new phenomenon in library and information profession. Libraries have a long history of outsourcing services to both non-profit organizations and/or profit making commercial firms. The activities and services outsourced are mostly behind the scene operations and patrons are unaware of the practice.

Libraries work in a continuously changing environment. What they do, what services they provide and how they organize their resources to provide those services, are all subject to a changing paradigm. Outsourcing is often linked with laying-off implications for library staff, however, after the depth study of available literature only one example could be found related to such implication i.e. in March 1995, the Chicago office of the law firm, Baker and McKenzie dismissed its entire library staff and outsourced it.

Outsourcing of library services has been practiced as far back as in 1828, when a bindery in Hartford, Connecticut, published books and sold them by subscription. However, there are a number of events in the 20th and 21st century, which have shaped outsourcing issues as we see them today such as:

ALA Outsourcing Task Force Report (1999) reported the ‘sale of Catalogue Cards by the Library of Congress (1901); the Greenway Plan for Blanket orders of new publications to J. B. Lippincott Company by the Free Library of Philadelphia (1958); the outsourcing of Book Selection, Copy Cataloguing, and Physical Processing by Fort Worth Public Library to three
vendors within five different agreements (1992-93); the outsourcing of full Cataloguing at Wright State University (1993); the outsourcing of Collection Development and Management by the Hawaii Public Libraries to Baker and Taylor (1996).

Florida House of Representatives Committee on Tourism (2002) mentioned the ‘outsourcing of all Library Services to Library Systems and Services (LLC or LSSI) by Riverside County Free Library (1997) and the outsourcing of Library Management by Calabasas Public Library to LSSI (1998). The Hemet Public Library entered into a two years “Special Service agreement” with LSSI (1999), the Jersey City Free Public Library outsourced its Management and Operation to LSSI and in 2000 they reconsidered outsourcing for the Automation needs of the library. The Linden Free Public Library, Fargo Public Library and Lancaster Veterans Memorial Library outsourced their Management and Operations to LSSI (2001).


Tokyo Metropolitan Staff Report (1977 cited in Wu, 2005) reported that 47 out of the 93 public libraries in Tokyo implemented partial outsourcing in classification, cataloguing and other technical services. The Autonomy Daily, Japan (1981 cited in Wu, 2005) investigated 542 public libraries and found that
37% and 58.5% libraries outsourced their security and cleaning activities respectively.

The technical services outsourcing concept ranked as one of the hottest topics in the library profession in the mid-1990s in USA. Outsourcing seminars were being held across the USA with increasing frequency. However, the magnitude of interest in this topic is evidenced by the fact that over 90 articles on various aspects of technical services outsourcing appeared in library literature from 1993 to mid-1996 (Wilson and Colver 1997).

The trend towards outsourcing in libraries is increased in the United Kingdom in 2003 (Ball, 2003) and Australia in 2007 (Robertson and Catoggio, 2007). Outsourcing is gaining a place in Indian special libraries since 22(Singh, 2006).

1.23 **INDIAN SCENARIO**

Indian libraries are also using outsourcing since many years e.g. Lahiri and Singh (1989) reported that INSDOC (now NISCAIR) had transferred the National Union Catalogue of Scientific Serials in India (NUCSSI) on mega tapes and developed the database in house. However, for making NUCSSI database accessible online, NISCAIR outsourced it to NICNET and INDONET.

Joshi (1995) concluded “contracting out/ outsourcing reprographic services would result in saving of capital, saving of staff, better services, cost effective, regular and quick services and better user satisfaction as compared to the services provided by the library.”

IIT Bombay (2004-05) “got 5700 volumes bound through outsourcing and a commercial vendor provides photocopying services in library premises.”

Malhan (2006) reported “outsourcing of some of the sections e.g. reprography and the internet access at some libraries to improve efficiency, eliminate problems and achieve the desired quality of work. To achieve the time targets of project based work, some libraries were getting the work done
through outsourcing e.g. retro-conversion of card catalogues, introduction of RFID technology.”

Singh (2006) found “outsourcing and flexi-work force among various emerging trends and developments taking place in special libraries in India. Tasks such as acquisition, cataloguing and classification, retro conversion, stock taking, compilation of bibliographies, automation of library and the like, could all be outsourced.”

Kurukshetra University Library (2006) reported “digitization of the Manuscript collection of Palm leaf, Sharda, Persian, Bangla, Gurmukhi and Oriya scripts by a Chandigarh based NGO The Nanakshahi Trust.”

Urs (2007) found “that most of digital library initiatives outsource the digitization work to some reliable vendors.”

Limbachiya (2008) reported that Indira Gandhi Centre for Atomic Research contracted out bar coding and implementing Radio Frequency Identification tagging (RFID) of all their documents to LibSys.

Satija and Sarbinder Kaur (2009) reported “outsourcing of the union catalogue preparing services to Informatics India by INDEST consortium.”

Bansode and Desale (2009) mentioned “the database creation of around 450000 books and RFID implementation work by Jayakar Library, University of Pune through outsourcing.”

Koganuramath and Angadi (2010) reported that Tata Institute of Social Sciences (TISS) hired library professional staff with computer skills for two major projects of digitization of periodicals. The first project included digitization of approximately 46,900 pages of 67 back volumes of Indian Journal of Social Work and second project included approximately 15,000 pages of 55 back volumes of Sociological Bulletin within 18 and 10 months respectively.

Almost all Indian libraries outsource their translation work to National Institute of Science Communication and Information Resources (NISCAIR).

Outsourcing has grown tremendously with the arrival and growth of Information and Communication Technologies. During the initial days of library, outsourced operations were narrow and limited to auxiliary activities such as Binding, Photocopying, Security and Janitorial services etc. However, today it has expanded widely to more complex and extensive operations such as Cataloguing, Reference services, Preservation, Retrospective Conversion, Digitization and RFID tagging etc. These practices were not generally labeled as outsourcing when first adopted but they become common practice today.

1.24 TYPES OF OUTSOURCING USED IN LIBRARIES

a) CO-SOURCING: When a function is performed by both internal staff of library and external resources, such as consultants or outsourcing vendors, with specialized knowledge of that particular function e.g. implementation of RFID in a library.

b) BACK-SOURCING/IN-SOURCING: When technology is getting cheaper and library bringing back that function to in-house which had been outsourced earlier because now it is more beneficial to run that operation internally e.g. libraries online systems is no longer run from university computing centers so it moved from university computing centers to library.

c) MULTI-SOURCING OUTSOURCING: A strategy in which a library combines multiple deals with same vendor or library can buy different kinds of products from the different vendors e.g. a library often buys books and periodicals from the same vendor or different vendors. Termination of one vendor contract does not affect the others.
d) SELECTIVE OUTSOURCING: when library outsources only specific applications. This is most prevalent in libraries and is used extensively for projects such as Retrospective Conversion, RFID tagging and Digitization etc.

e) SHARED OUTSOURCING: when a vendor works for more than one library at the same time e.g. a library automation software provider working on the same software code for several libraries.

f) TOTAL/ FULL OUTSOURCING: when a library decides to close a department and transfers the function in totality to an outside vendor e.g. library closes down its binding department and outsources it to an outside vendor.

g) TEMPORARY OUTSOURCING: This type of outsourcing is adopted by the library as a rapid and short term solution for a particular problem/task. e.g. a library may need to spend a fixed amount of money within a specific time frame.

h) BUSINESS PROCESS OUTSOURCING (BPO): when a particular process/ task is outsourced by library within an institute or to outside institute e.g. outsourcing of library website design and development to Computer Centre.

i) TRANSITIONAL OUTSOURCING: It involves the library migration from one platform or mode of operation to another. It consists of three phases: management of the traditional system; transition to the new platform or system and stabilization and management of the new platform e.g. shifting from traditional library to digital library.

j) CROWDSOURCING: The difference between crowd-sourcing and ordinary outsourcing is that as compared to outsourcing in crowdsourcing a task or problem is outsourced to an undefined public rather than a specific body e.g libraries invite people to mark the errors in library catalogues etc.

k) CLOUDSOURCING: Cloud computing is a technology that uses the web (Internet) and central remote servers to maintain data, software and application. Cloudsourcing is a process by which specialized cloud products and services
and their deployment and maintenance is outsourced to and provided by cloud service providers. It is the combination of cloud computing and outsourcing. Libraries have been using cloud computing services for over a decade e.g. online databases are accessed as cloud applications.

1.25 WHAT TO OUTSOURCE CORE VS. NON-CORE ACTIVITIES?

Certain activities provide character to any organization, whether private, public, profit making or non-profit making. These activities are necessary to identify that organization and if these activities are taken away from the organization, there need of that organization would also eliminate. Such activities are called core competencies. An organizational core competency is an organization’s strategic strength which differentiates an organization from its competitors.

Quinn and Hilmar (1992) defined that core competencies “tend to be sets of skills that cut across traditional functions rather than ownership of assets.”

Greaver (1999) mentioned that “core competencies are the innovative combinations of knowledge, special skills, proprietary technologies, information and unique operating methods that provide the product or the service that the customer value and want to buy.”

According to SHRM India Private Limited “A core competency refers to a company’s set of skills or experience in some activity, rather than physical or financial assets.”

Any organization cannot run only by performing core functions. A host of peripheral operations/ Non core functions/ Auxiliary functions are also needed which provide the infrastructure to organization. Non-Core Functions are “those processes that either add significant value to the core product or service or provide the means for supporting the company and retaining employees (for example cleaning, payroll, maintenance and so on)” (Tompkins, Simonson, Tompkins and Upchurch, 2005).
Organizations can give more attention to its core competencies after the outsourcing of its auxiliaries operations. It is the main reason that most of organizations do not outsource their core competencies, however, some companies do outsource these also. There is no infallible method available to identify the core competencies of an organization. Because these vary from organization to organization. It is possible that which is considered as core in one organization’s context may be considered as non-core in another. However it is important to know what constitute as core functions in libraries?

ALA Outsourcing Task Force (1999) reported that “core services are those professional activities that define the profession of librarianship. These include collection development and organization; gathering and providing information; making the collection accessible to all library users, providing assistance in the use of the collection and providing oversight and management of these activities.”

Librarians have different perceptions of where core services end and auxiliary services begin e.g. cataloguing, once considered as core service are now being outsourced by many libraries. Were libraries outsourcing their core functions or not? Different authors answer this question in different ways, but Hirshon and Winters (1996) provide most innovative solution, when they asserts, “While the final output generated by technical services is core, the operations themselves are not.”

Librarians can make their decision easier regarding whether or not to outsource by using the checklist ‘Outsourcing Cataloging, Authority Work, and Physical Processing: A Checklist of Considerations’ (Kascus and Hale, 1995) ‘Weighted Decision Matrix’ is also a useful tool for assessing library services as candidates for outsourcing or not (Ball, 2003). The following are the library functions that are generally outsourced by libraries: Cataloguing; Classification; Preservation; Shelving; Photocopying; Binding; Translation; Bar Coding; Members Identity Cards Preparation; Indexing and Abstracting; Database Management; Network Management; Web Site Designing and
Maintenance; Microfilming; Printing; Retrospective Conversion; Digitization; Subscription Management; RFID Tagging, Temporary Staffing etc.

Tom Peters is supposed to have summed it up by saying, “you should do what you do best and outsource the rest.”

1.26 **REASONS**

In today’s world of growing competition, organizations are forced to look for new ways to generate value. The world has embraced the phenomenon of outsourcing and organizations have adopted the principles to help them in providing excellent services, to save time, to raise efficiency, to improve the quality and quantity of its product and services etc. The overall goal of outsourcing is to reduce cost and maintain or increase the quantity and quality of products and services. This is the primary reason for organizations to consider outsourcing as an attractive alternative. However, outsourcing is not a one-size-fits-all process. Different organizations may choose different outsourcing strategies to suit their specific conditions.

Similarly in library’s specific environment, mission, infrastructure, current information systems and library management initiatives determine the feasibility of outsourcing. Libraries must determine whether the supposed advantages apply to the library or not. Cost effectiveness and improving user services in libraries are two main reasons for which libraries considering outsourcing as an option.

Why would a library want to outsource? Hirshon and Winters (1996) identified and described two categories of reasons:

a) **Strategic Reasons**

i. Enable library to focus on core operations.

ii. Ability to reorganize operations without having to undergo extensive retraining or analysis of details of process.

iii. Greater organizational flexibility.

iv. Creates opportunity to reassign staff to other duties.
b) Tactical Reasons

i. Cost considerations.

ii. Needing specialized services which are not already provided in-house.

iii. Avoiding difficult or unproductive work situations.

Portugal (1997) identified four main reasons for outsourcing library service: Cost reduction, centralizing services, control of access to information and a renewed emphasis on business information.

White (2000) gave various valid reasons to outsource library operations. He reported that cost effectiveness is often achieved by hiring a firm that already has the skills, equipment, and staff to do the job. Because, they can perform the job better and at a lower cost, without effecting quality. Often, a backlog of work can be eliminated through outsourcing and it is especially true in technical service functions. However, the cost savings are not worth much if libraries lose quality of service.

The main reasons why libraries should outsource their work are summarised below:

a) To concentrate on core activities.
b) Due to the lack of required staff and expertise in-house.
c) Operating and training costs can be reduced.
d) To increase the quality and quantity of product & services.
e) Value-added services can be provided.
f) To increase productivity.
g) User satisfaction can be ensured.
h) Skilled manpower can be bought at lower rates.

1.2.7 ADVANTAGES

There are many advantages to consider outsourcing by libraries. The reasons vary from one library to the next. However, the majority of the libraries consider outsourcing for the following advantages:
**a) Focus on Core Services:** Outsourcing is identified as a method of spinning off unnecessary work in order to focus on library’s primary goals. Outsourcing allows libraries to concentrate on core services and reduce time and effort spent on other peripheral functions. Outsourcing redirects staff to other areas within library and helps in introducing new services to users.

**b) Cost Control:** Another important reason to consider outsourcing is to reduce and/or control costs (use of contract labour over direct employment). Outsourcing can lower costs because the private sector contractors may be able to accomplish the task with fewer staff. Further, it reduces ongoing costs for permanent staff and training and overhead costs for space and equipment may be reduced. Outsourcing is completely scalable and economical for all libraries instead of only big libraries (Robertson, 2009). Outsourcing will survive in lean economic times and it is one of the many viable options for improved efficiency (Dubberly, 1998).

**c) Acquire Specialized Skills and Expertise:** Outsourcing enables libraries to acquire expertise with specialized skills and state-of-the-art capabilities that are not normally available in-house. Libraries can get benefited by contracting with specialists or professionals for specific tasks that the organization cannot afford to hire on a permanent basis or might not need except in particular circumstances. Many libraries outsource very specialized, technical and ICT related functions e.g. outsourcing digital preservation and RFID implementation functions etc.

**d) Improves Production:** Vendors are more production oriented than libraries themselves. Outsourcing increases productivity and often results in reduced turnaround time e.g. retrospective conversion carried out in-house takes more time than outsourced. Outsourcing may improve services that have become unproductive (Ebbinghouse, 2002).

**e) More Control on Library Process:** Outsourcing some activities does not mean that librarians loose their control on library process. Librarians have more control because they are working on the process and monitor constantly (Robertson, 2009). A good contract and a good relationship with the
vendor will help the library monitor performance, quality, and maintain control of the operation (Baker, 1998).”

f) **CONTROL OVER VENDORS:** Through the contract, a library may have more control over a vendor and its performance than over its own employees. Libraries can ensure the consistent delivery of a quality product. If the quality is not satisfactory, libraries can always cancel the contract with the vendor. To maintain control and keep service standards high, library managers must develop methods of dealing with outsourcing (Bordeianu and Benaud, 1997).

g) **IMPROVE COORDINATION:** Managing relationship with vendor is essential for the duration of the outsourcing program. It requires cooperation among many areas of the library. Therefore, it enhances the communication between various departments within the library and promotes teamwork.

h) **REDUCE/ SHARE RISK:** Tremendous risks are associated with the investment in the new projects e.g change in technology, financial conditions, staff training etc. Keeping in view all these changes, libraries make investments on behalf of outsourcing vendors. Shared investment spreads risk and significantly reduces the risk borne by the library.

i) **INTRODUCED NEW VALUE ADDED SERVICES:** The outsourced vendor can provide new services, which are not offered by the library e.g. a cataloguing vendor can provide table-of-contents services which is normally not provided by the in-house library staff.

j) **TAKING ADVANTAGE OF FUTURE TECHNOLOGIES:** As new technologies emerge most libraries cannot immediately take advantage of them. Because of the high cost and learning curve associated with these technologies. However, the outsourcing service provider/ vendor is familiar with the new technologies, library will need to spend less time, finance effort and less risk in implementing the new technologies.

1.28 **DISADVANTAGES**

Outsourcing has become an established management tool. Many libraries have begun to consider outsourcing as an alternative to delivery service and in
many cases individual libraries have made successful use of outsourcing. However, outsourcing presents both benefits and problems. If not done well, outsourcing can cause significant problems.

a) **Loss of Control:** Loss of control over the outsourced operations is the most critical problem faced by the libraries, as staff has to renounce some control to vendors. Loss of control can take many forms and its implications differ according to the outsourced functions. Loss of control can be minimized in the following ways: retaining core functions in-house, linking outsourcing contract payments to specific deliverables; treating outsourcing companies as partners rather than vendors; ensuring that the outsourcing partner understands and supports the purpose and values of the library etc. (Cubberley and Partners, 1999)

b) **Staff Morale:** Outsourcing affects staff morale because the changes inevitably associated with outsourcing produce high levels of stress and transfer from one section to other sections affecting the work of staff. Therefore, librarians may use the counseling for staff, in order to rebuild trust, encouraging them to learn new technologies and create a positive work environment within the library.

l) **More Costly:** Outsourcing does not automatically result in lower costs. It depends upon the library needs and terms of the contract. Outsourcing services may be more costly than in-house if they are done without proper planning. Librarians need to make proper comparison of cost a service or function whether it is provided by in-house staff or outsourced vendor.

c) **Decline in Quality:** When a function is outsourced, there may be a risk that the new group doing the work will not maintain the same level of quality as previously established. Successful outsourcing depends on careful planning and attention given to details such as: how the quality of the level of service is to be maintained or enhanced. Service quality controls can include establishing: service standards and levels, performance measures, monitoring
systems, rewards for exceptional performance, penalties for nonperformance, third-party quality inspection etc.

**d) LESS LOYALTY:** Contract employees are not as loyal as internal staff. Confidential information of libraries cannot be shared with contract staff. They are not the regular staff of the organization and feeling unsafe which reduces their morale and feeling of belongingness.

### 1.29 Phases of the Outsourcing Process

Successful outsourcing venture depend on clearly communicating the organization needs and expectations from the potential vendors, determining which vendor will provide the best service and carefully creating a contract to reflect those expectations. There are a number of conceptual models of outsourcing process/life cycle and these models are useful to understand the various phases involved in outsourcing process. Different authors define different phases of outsourcing process/life cycle.

According to MalkosUA (2007) there are three main phases of outsourcing lifecycle: Contracting, Transition and Execution recognized in business. According to International Association of Outsourcing Professionals mentioned the nine steps in outsourcing life cycle: Strategy, Reassessment, Selection, Negotiation, Implementation, Oversight Management, Build Completion, Change and Exit. Benaud and Bordeianu (1998) defined the three phases of outsourcing namely Planning, Implementing and Management.


The process models developed by Lever and Zhu et al. are on the whole very similar apart from the difference in focus at the second stage. The models based on Lever and Zhu., Hsu and Lillie description are shown below in Figure 1.1 and Figure 1.2.
Barthelemy and Geyer (2001) suggested seven phases in successful outsourcing process: Planning, Exploring Strategic Implication, Analyzing Cost and Performance, Selecting Vendor, Negotiation, Transitioning Resources, Managing Relationships which are shown below in Figure 1.3

In Strategy phase, a decision to outsource is suggested, reviewed and evaluated. Selection phase covers the definition of the work to be outsourced and finally making the selection of the “best-fit” vendor. Negotiation phase includes both the negotiating the contracts and associated agreements, and the final contract signing. Implementation phase involves the start-up activities of planning the transition and implementation of the outsourced agreement. Management phase encompasses all ongoing activities required to manage the program, and achieve the contracted results. Completion, the final phase, covers all completion activities and close out of the program.

The Outsourcing Lifecycle model based on the above six phases is shown in Figure 1.4 (Everett and Dixon, 2001).

**Figure 1.4: Outsourcing Lifecycle Phases**
But Cullen (2005) created highly descriptive outsourcing lifecycle model that consists four phases: Architect, Engage, Operate and Regenerate Phase and these phases are combine in nine building blocks (Investigate, Target, Strategize, Design, Select, Negotiate, Transition, Manage and Refresh) and these blocks contain 54 key activities. This model is based on the case studies of 100 outsourcing cases from 1994-2003.

**Architect Phase** — where the foundation for outsourcing is laid; consists of the first four building blocks of Investigate, Target, Strategize, and Design.

**Engage Phase** — where one or more suppliers are selected and the deal is negotiated; consists of the fifth and sixth building blocks of Select and Negotiate.

**Operate Phase** — where the deal is put in place, made operational, and managed through its term; consists of the seventh and eighth building blocks of Transition and Manage.

**Regenerate Phase** — where next-generation options are assessed; consists of one building block Refresh. Figure 1.5 (Cullen, 2005) shows these phases and building blocks of the outsourcing lifecycle, while Figure 1.6 (Cullen, 2005) shows the 54 key activities of these building blocks.

![Outsourcing Lifecycle Model: Phases and Building Blocks](image-url)
FIGURE 1.6: THE OUTSOURCING LIFECYCLE: GOALS AND KEY OUTPUTS

All above models are available in the BPO and IT sector. On the basis of these models the concluding phases of outsourcing life cycle in libraries can be viz. Planning, Proposal Development, Negotiation, Implementation, Management and Completion or Termination phase.

1.291 FACTORS FOR SUCCESSFUL OUTSOURCING

A successful outsourcing venture will depend on clearly communicating the libraries needs and expectations to potential vendors, determining which vendor will provide the best service for the specific functions needed and carefully creating a contract to reflect those expectations. However, there are several general things to keep in mind when making the decision to outsource:

a) UNDERSTANDS CORE COMPETENCIES: Certain activities give character to any organization whether it is private, public, profit making or non-profiting. These activities are called core competencies. Almost all the organizations do not like to outsource their core competencies, but some outsource these also. No foolproof method is available to identifying core competencies of an organization. What is core in one institutional context may
be considered peripheral in another. So librarians should make a clear distinction between the functions to be outsources and those that remain in-house.

b) **FOCUS ON LONG-TERM BENEFITS AND GOALS:** Before beginning to investigate for outsourcing services, library staff need to determine exactly what are the overall goal for making changes to their current procedures. Is it to increase efficiency, improve accuracy, etc.? Doing this will help determine whether outsourcing is the right choice for library’s situation. It is easy to be overwhelmed by the enormous amount of details associated with planning and implementing an outsourcing program. In the midst of coping with daily challenges during the early stages of outsourcing, it is important to remain focused on the long-term benefits and goals, which will be achieved as a result of outsourcing.

c) **FAMILIARIZE TO CHANGE:** It is essential to accept from the beginning that things will be different from the past. Adapting to change is a part of the process, it is also important to recognize that compromises are necessary for the new environment. Adapting to change and taking the necessary steps to make change occur more easily to the success of any outsourcing endeavor (Wilson, 1997).

d) **CHOOSING THE RIGHT VENDOR:** Choosing the right vendor is critical. Vendor’s commitment to quality, price, references/ reputation, flexible contract terms, scope of resources, additional value added capability, cultural match, existing relationship, location and financial stability are the primary considerations to look at when choosing an outsourcing vendor. The vendor should be capable to understand and support the library’s goals.

e) **PROPERLY STRUCTURED CONTRACT:** Libraries should consider several factors before entering into an agreement with a vendor. The key contract elements includes: responsibilities and service (statement of work), price, work schedule, performance standards, guarantees, penalties, flexibility, personnel provisions, ownership of data, intellectual property rights,
warranties, limitations of liability, confidentiality and disclosure, right to negotiate, changes clause dispute resolution, termination.

f) **MANAGING RELATIONSHIP**: Library staff needs to embrace the new vendor relationship rather than withdrawing from the outsourcing situation. Library staff needs to be committed to providing the necessary management oversight to make outsourcing work for the entire organization (Wilson, 1997). Managing relationship with vendor is essential for the duration of the outsourcing program.

g) **GIVE THE OUTSOURCING PROCESS TIME TO WORK**: Once implementation begins, it takes at least six months to one year to obtain the full benefits of an outsourcing effort. It is important to allow time for the process to work. There is a need to understand that it takes time to overcome obstacles and to resolve problems that will certainly occur when implementing an outsourcing program (Wilson, 1997).

h) **KEEP A SENSE OF HUMOR**: Outsourcing is not easy and does not happen immediately. Keeping a sense of humor and being able to maintain a sense of perspective makes it much easier for library staff to survive the outsourcing planning and implementation processes (Wilson, 1997).

### 1.3 CURRENT TRENDS

#### 1.3.1 CROWDSOURCING

The old proverb “*none of us is as smart as all of us*” is apt for defining crowdsourcing, which means a group of individuals working together as a team can do better work and take better decisions than individuals. This is the main motive behind the concept “wisdom of crowd”. The wisdom of crowd refers to the process of taking the collective opinion of a group of individuals on a specific problem rather than a single expert. ‘More people can make More Progress’ is a simple natural logic. That is why majority of the organizations contact each other in performing certain tasks which they are not capable of performing individually.
In the outsourcing process organizations outsource some of their work/functions to an outside agency (a vendor/organization/individual) who can work for them at lower costs and also saving their time. When organizations formally outsource their work/functions/problems to hundreds or thousands of unknown individuals and organizations and ask let all of them to come up with appropriate solutions and the best solution of all can be picked up then it is called crowdsourcing. This means allocating work to a defined organizational entity is called outsourcing whereas allocating work to unorganized, undefined individuals is called crowdsourcing.

The practice of tapping the crowd has long been used worldwide in every sector of society. Outsourcing is moving through waves of specialization (outsourcing) through globalization (offshoring) through social networking (crowdsourcing). Now-a-days Web 2.0 technologies are used rapidly and affordably reach to a global crowd, engage their interest, manage and filter their ideas, feedback and help to choose the optimal solutions. This is a technique of outsourcing tasks to a broad, loosely defined external group of people. Thus, we can say crowdsourcing itself is not new. However, it is quite a new term which is quickly becoming an important social concept.

In simple words, “Crowdsourcing” is a combination of terms ‘crowd’ and ‘outsourcing’. Crowdsourcing is the act of outsourcing tasks, traditionally performed by staff or a contractor, to an undefined large group of people or crowd.

Jeff Howe and Mark Robinson first time formally introduced the term ‘Crowdsourcing’ in 2006. They described crowdsourcing as "the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential laborers.”
Online Business Dictionary describes crowdsourcing as “the outsourcing of job functions to groups of people who operate independently and who are willing to provide their services in exchange for experience, recognition or low rates of pay. Recognizing that technology advances have enabled people to develop superior technical skills and talent in the comfort of their homes, companies are now using social media and Internet forums to invite them to participate on specific projects.”

According to Laura Lake (2011) “crowdsourcing is using collective intelligence gathered from the public and using that information to complete business-related tasks. These tasks are normally completed by the company or a third-party service provider, but through crowdsourcing the public assists in the completion of these tasks. Companies are often attracted to crowdsourcing because it expands their talent pool and is often free. Crowdsourcing also allows a company to gain insight into their customers and what they desire.”

According to Financial Times Lexicon, crowdsourcing is “a business model or function that relies on a large group of users as third parties for outsourcing certain tasks.”

Thus, we can say that crowdsourcing is a means to use talents of the crowd. Any member of the crowd can complete the assigned task and get rewarded for his/her efforts. Although this form of outsourcing is used in every sector viz. academic, corporate, research and development for a diverse range of tasks that can be better completed by a crowd rather than by their own employees.

“Work smarter, not harder” is the motto behind the concept of crowdsourcing. Now it has become a distributed problem-solving and business production model that introduces new or more developed skill sets or a larger work force to achieve some specific goal (s).

1.3.1.1 Types of Crowdsourcing

Crowdsourcing can be broken down into three categories:
a) **CROWD CREATION:** Crowd creation is those crowdsourcing activities that use the creative energy of participants. Crowd creation is in many ways similar to user-generated contents e.g. [Wikipedia](#) (creating a web based encyclopedia), [A Swarm of Angels](#) (creating a movie), [AMillionPenguins](#) (creating a novel), [We Are Smarter Than Me](#) (creating a business book) etc.

b) **PREDICTION MARKETS:** The “Wisdom of Crowds” principle attempts to harness many people is knowledge in order to solve problems/ predict future outcomes. In prediction markets, speculators can bet on the chances of future news events, such as the outcomes of sports events, political elections and stock market etc. e.g. [Hollywood Stock Exchange](#) (predicting the ups and downs of celebrity careers or entertainment properties), Yahoo! Suggestion Board (determining which issues are the most important), [Dell IdeaStorm](#) (predicting which ideas for new Dell products will sell).

c) **CROWD VOTING:** Crowd voting leverages the community’s judgment to organize, highlight information and stack-rank contents such as newspaper articles, music and movies. It is the most popular form of crowdsourcing, which generates the highest levels of participation. e.g. [del.icio.us](#) (organizing the web based user tags on books), [Yahoo! Buzz Index](#) (raking of the news on the basis of users votes) and [Threadless](#) (submit new designs and vote for designs) etc.

### 1.3.1.2 AREAS OF PRACTICAL IMPLEMENTATION

Crowdsourcing has helped in creating the world's greatest inventions and biggest brands. Many organizations use this strategy in the form of collecting the ideas, suggestions, feedback, and opinions from crowd for their new creations and developments. Every sector of the society viz. Govt., Social Benefits, Corporate, Entertainment, Academic, Research and Development and Libraries etc. are flourishing with the use of crowdsourcing.

a) **GOVERNMENT:** Government sector firstly used crowdsourcing in 1714, when British government offered a ‘**Longitude Prize**’ to the person who could
devise a way of accurately measuring longitude at sea, with the awards ranging from £10,000 to £20,000 depending on accuracy. The Board of Longitude gave over £100,000 to people in the form of encouragements and awards (Wikipedia, 2011).

In 1775, King Louis XVI of France and the French Academy of Sciences offered a prize of 2400 livres (former French currency) for providing a method to separate salt from Alkali (Sodium Carbonate and Potassium Carbonate collectively termed Alkali). In 1791 Nicolas Leblanc won ‘Alkali Prize’ by provided the solution and he was awarded a patent for this. However, due to the French Revolution his award was not paid until many years and later it was paid to his heirs after his death (King, 2008).

In 1795, Goverment of France (Napoleon) and Society for the Encouragement of Industry offered a ‘Napoleon Preservation Prize’ of 12,000 Francs to improve the food preservation methods of that time, in order to keep soldiers fed and nourished. Nicholas Appert won the challenge by designing a way to heat, boil and seal food in airtight champagne bottles in 1809 (Grauschopf).

In 1909, The Daily Mail, a British newspaper, offered a £1,000 prize for the first pilot to fly across the English Channel. On July 25, 1909, Louis Bleriot won the prize by flying his monoplane with a 25-hp engine across the channel from Calais, France, to Dover, England (King, 2008).

Edward Fredkin, Computer science professor established ‘Fredkin Prize for Computer Chess’ at Carnegie Mellon University in 1980 to encourage continued research in computer chess. The prize was awarded in three tiers, with the first prize of $5,000 given to two scientists from Bell Labs in 1981. The second-tier $10,000 prize went to five Carnegie Mellon graduate students in 1988. In 1997, an IBM team won the third-tier prize of $1,00,000 for building the first computer to beat a world chess champion Garry Kasparov (King, 2008).
In March 2009, Indian Finance Ministry, Government of India, announced a contest to create a ‘Symbol for Indian Rupee’. Total 3000 designs were submitted in this competition and the winner designer Udaya Kumar received the cash prize of ₹ 2, 50,000 (NDTV, India, 2010).

In Hyderabad, the local government uses Global Positioning System Technology and cellphone cameras to manage the mounting problem of uncollected garbage. Sanitation supervisors take photos of overflowing trash cans and images are uploaded in the real times. This helps officials to hold sanitation workers accountable (Rama Lakshmi, 2011).

‘SAMADHAN’ is an Internet-based platform piloted in Sehore District of Madhya Pradesh and Koraput District in Orissa. It is a way for citizens to directly demanding what their government had already promised them and track their service entitlements under national and state government schemes. In this system, the citizens can register any complaints like the road potholes, late arrival of widows’ pensions etc. by just sending a simple text message or by calling at a toll-free number. The citizens can track the status of their complaint through a unique ID number automatically allotted by the system and they are also informed about the action taken by government in response to their complaints (Joint Initiative Collectorate Koraput, UN Millennium Campaign, SOVA and VSO, 2011).

b) Social Warfare: Crowdsourcing is supportive to raise the voice against various social evils, security and assistance. Successful social justice campaigns run by the crowd for ‘Priyadarshani Mattoo’ (1996-2010) and ‘Jessica Lal’ (1999-2010) cases in India are the best examples in this area.

After three major blasts in Mumbai in July 2011, People used Twitter to communicate information about location of blasts, latest updates etc. Tweets like #Mumbaiblasts, #needhelp and #heretohelp were quickly retweeted and within minutes hundreds of people filled the spreadsheet offering food, accommodation, medical help, blood donation and even flight tickets for emergency cases. Google spreadsheet was created to gather details about the
victimized, stranded and those who were willing to help. On the other side, Ajay Kumar (Twitter: @ajuonline) of India, promptly joined by volunteers from all around the world and they created a collaborative map by using USHAHIDI platform to help and guide the Mumbai citizens. The map Mumbai Unites (maps.myindia.bz/mumbai/) had collected information through Skype, Twitter, Facebook and through a form for internet users who were willing to contribute (Mumbai Unites, 2011).

An Indian NGO Whypoll on December 21, 2011 in New Delhi launched a new unique mobile application called ‘Fight Back’ for women safety against sexual harassments, molestation, rape and any other kind of harassment. It enables a woman to send an SOS (International Distress Signal is SOS) message via SMS, e-mail or Facebook with just pressing a single key to her friends from her smartphone if she is harassed. The SOS also goes to her Facebook page. Once the SOS is activated the recipients are able to track the sender's location via GPS and can come to her aid. The ‘Fight Back’ application is available at ₹ 100 for a year. The application is currently available only in English but it is planned to be offered in other Indian languages also and reach in nine more cities by the end of 2012 (India Today, 2011).

c) **CORPORATE:** Like the other sectors Corporate sector is also taking the help of crowd for various tasks e.g. for collecting the funds for designing and creating products, to find out the business solutions, market predictions and to promote the new products and development in their existing products etc.

In 2000 the ‘Goldcorp Canadian Mining Company’ put all the geological data on the internet for the land in Red Lake, Ontario and offered $500,000 prize money for the best recommendations for locating its gold reserves areas. By downloading and analyzing 400 MB of geological data, contestants identified 6 million ounces of gold deposits. In total, the challenge website received more than 4,75,000 hits and more than 1,400 people from 51 countries registered as challenge participants (McEwen, 2001).
'FantasySCOTUS.net' from Harlan Institute, US is the Internet’s premier Supreme Court Fantasy League, and the first crowdsourcing prediction market for jurisprudential speculations started in October 2009 with over 5,000 members including attorneys, law students etc. made more than 11,000 predictions for 81 cases decided. Based on this data, FantasySCOTUS correctly predicted the outcome in more than 50% of the cases decided, and the top-ranked predictors correctly forecasted over 75% of the cases (Harlan Institute, US, 2012).

Himalaya Herbal Healthcare rolled out an innovative marketing campaign for its sanitizer, ‘Pure Hands’, where college students across Bangalore were invited to make a video for Pure Hands that highlighted product benefits in an exciting way. This contest ran on the Facebook. The winning team got a cash prize of ₹1 lakh. The first and second runners-up win ₹50,000 and ₹25,000 respectively (Audience Matters News Desk, 2011).

d) Entertainment: Crowdsourcing is used in entertainment in various forms like live talk shows, real shows. This innovative idea is also used in making movies, raise funds for movies, translating movies etc.

‘I Am’ is first biggest crowdsourced film in India, produced by Sanjay Suri and Onir with over 400 co-producers from 35 cities across the world in 2009. The total cost of this film was ₹3 crore and one-third of the budget was raised through Facebook. The highest amount was ₹15 lakh and the lowest ₹1,000 contributed by the public (Forbes India, 2011).

‘Life in a Day’ is a crowdsourced documentary film of 94 minutes 57 seconds comprising an arranged series of 1000 video clips selected from 80,000 clips of 4500 hours submitted from 192 countries on YouTube video sharing website, these clips showed the story of various occurrences from around the world on a single day i.e. 24th July 2010 (Watercutter, 2011).

The makers of film ‘First Orbit’, which traced Yuri Gagarin’s 1961 journey around Earth, are asking the world to translate the film into as many languages as possible. The First Orbit premiere event generated 1600 public
screenings in more than 130 countries around the world, and attracted over two million viewings on YouTube within the first 48 hours, making it the most watched film release in cinema history (Educational News, 2011).

e) Academic: Use of the concept of crowdsourcing in the academic world can be traced back in January 1859, when the Philological Society in Great Britain started preparing the New English Dictionary. The society made an appeal to the English-speaking and English-reading public to read books and contribute extracts for the Philological Society's New English Dictionary. This notice was sent to bookshops and libraries across the English-speaking world under the direction of Scottish lexicographer James Murray. This Appeal met with generous response from hundreds of volunteers of Great Britain, America and British colonies. They began to read books, made quotations and sending the definitions on paper slips to the society. Oxford University Press took this project in 1878 and in 1879 Oxford University Press officially agreed to publish this as ‘Oxford English Dictionary’ (Winchester, 2004).

The INFLIBNET Centre, Ahmedabad, has launched an online repository, called ‘Indian Electronic Theses and Dissertations’, facility wherein students of the Indian universities have to submit electronic versions of their theses and dissertations and another initiative named ‘Open Journal System’ where INFLIBNET invites faculty from Indian universities to host their journals on the INFLIBNET’s platform (Arora, 2010).

Online submission of various types of forms is rapidly becoming popular which is another form of crowdsourcing, it saves a lot of money and time of the organizations, institutions etc. Many institutions have started admission, examination, conferences, workshops and seminars submission online forms etc. Since June 2011 UGC, India, has made it compulsory to submit the form for UGC-NET (National Eligibility Test for Lectureship) online. The candidates have to submit their details themselves online. As a result UGC saves Lacs of ₹ and time as it needs not get the data entered by the data entry operators.
These days web surveys are becoming popular in which online questionnaires are proposed and respondents have to submit them online. The questions are already coded and when it is submitted the data are saved in a file according to the already designated codes in the coded form which saves the time of the researchers.

In 2011, UNESCO teamed up with Nokia and the Pearson Foundation to launch the ‘Education For All’ (EFA) an eight-month initiative that was designed to enable people with similar interests to connect and collaborate on ideas to achieve EFA goals. It was planned to develop suggestions emerging from the dynamic interaction between education experts, teachers, parents, students and software developers. Each month was featuring a separate EFA goal. Prizes were awarded monthly to the best ideas, chosen by a panel of judges. Promising projects were developed and implemented by Nokia (UNESCO, 2011).

f) **Research and Development**: NASA and YouTube joint project, in the form of a competition called ‘Space Lab’, is a crowd-sourced competition in which 14-18 years old can upload a video of their homemade experiments, which would stream live on YouTube. The two lucky winners would get a chance to test their own notions 250 miles above the Earth’s surface. With projects like this, NASA expects to meet the budgetary cutbacks and would ensure that the organization keep up their technological edge in regards to research (You Tube Space Lab, 2012).

Xerox’s [India Innovation Hub](#) launched three projects aimed at exploring how new online techniques such as crowdsourcing can play a role in collaborative research and open innovation. The Hub collaborated with three Indian universities to complete the projects, including the Indian Institute of Technology, Bombay for the development of linguistic databases to provide automated translation of documents, Srishti International Labs for the creation of on-line marketplace portal and Indian Institute of Technology, Kharagpur
for Analytics of Dynamics of Mobile Phone Users project (Xerox Corporation, 2010).

**g) LIBRARIES, ARCHIVES AND MUSEUMS:** steve.museum is a group of 11 art museums formed in 2005 with objective to explore the use of social tagging for digital images of artworks in museum collection. During the project duration 2006-08, more than 90,000 tags were generated by 2,275 users for nearly 1,750 artworks (Steve: the Museum Social Tagging Project, 2008). Total 86% of new tags were found for museum documentation and 88.2% tags were found useful by museum staff (Trant, 2009).

In June 2006 the Powerhouse Museum, Australia launched their OPAC 2.0 Live and called people to contribute tags for their digital collection of approximately 4,00,000 objects. The total 17,394 visitors accessed OPAC in May 2006 which grew to 355,180 in December 2006. OPAC 2.0 Live put more than 70% of the Museum's collection on-line within 6 months. Total 3,928 tags were submitted for 2,200 objects (Chan, 2007).

In January 16, 2008, Library of Congress launched a pilot project on Flickr with the goal to expand outreach and improve the user experience to increase awareness by sharing photographs from the library’s collections with people who enjoy images but might not visit the library’s own website. Library published two collections of historical pictures on Flickr to collect information about these photos through the audiences’ comments and tags. They invited public to add tags and comments on these photos. 67,176 tags were added by 2,518 unique Flickr accounts and 7,166 comments were left on 2,873 photos by 2,562 unique Flickr accounts (Springer, 2008).

University of Oxford’s ‘**Great War Archive**’, project started in 2008. They invited public to submit digital objects of items originated from the First World War. In total over 6,500 items were submitted to the archive, all of which are now freely available online in the Great War Archive (University of Oxford, 2008).
‘Wir waren so frei … Momentaufnahmen 1989/1990’, is a cooperative project between the German Cinematheque and the Federal Agency for Civic Education which was started in 2008. They made an appeal to the people for contributions of images related to the fall of the Berlin Wall and the stories behind them. They found almost 7,000 private films and photos plus 100 accompanying written memories from the fall of the wall and German reunification. After that an exhibition was organised by the same name, “Wir waren so frei … Momentaufnahmen 1989/1990,” which took place between 1st May and 9th November 2009 at the Museum for Film and Television in Berlin. The exhibition centred approximately 300 private photos and films, which were different from the recordings of international TV reports and images by German documentary filmmakers (German Cinematheque and the Federal Agency for Civic Education, 2008).

‘Click! A Crowd-Curated Exhibition’ from the Brooklyn Museum invited artists to submit electronically a work of photography that responded to the exhibition's theme, “The Changing Faces of Brooklyn”, plus a 100-word artist statement. 389 photographs were submitted and subsequently judged by 575 people, using a custom built evaluation tool. 3,344 evaluators casted 410,089 evaluations and the top 78 images were put on display in the museum (Brooklyn Museum, 2008).

The National Library of Australia started a unique project of ‘Digitizing of Historic Australian Newspapers’ from 1803 onwards in July 2008. For this project the Library encouraged the public to correct/fix up/improve the errors in electronically translated (OCR) text of old newspapers and users were allowed to tag articles. The administrators noted that by “October 2009 over 6000 members from the public enhanced the data significantly by correcting over 7 million lines of text in 3,20,000 articles, and adding 2,00,000 tags and 4,600 comments to the articles. One exceptional user has corrected over 2,85,000 lines of text in over 7,000 articles (Holley, 2009).
The New York Public Library’s ‘Map Rectifier Project’, in which an online environment the public was requested to align ("rectifies") historical maps from the NYPL's collections to match today's precise maps. The outcome of this activity would make it possible to create visualizations showing changes in maps over time (New York Public Library, 2011).

‘Transcribe Bentham’ is a project of University College, London launched in September 2010 invited the public with the goal to transcribe the 60,000 original manuscript written by Jeremy Bentham (1748-1832), the great philosopher and reformer. 53% of the 7,464 manuscripts uploaded to the website had been transcribed up to 3rd August 2012 (University College, London, 2012).

The British Library launched ‘UK Soundmap’ in July 2010 with aim to preserve the sounds of year 2010 for the future and asking people to record and upload the sounds of their environment, be it at home, work or play. Most audio files (so-called 'Boos') were created by using a smart phone application – Audioboo for both the iPhone and Android phones. Users installed this application on their smart phones, made recordings and subsequently uploaded them, together with some contextual metadata including a geo-location data. Guidance on creation of Boos was available on the UK SoundMap Web site. Boos were converted from their original uploaded formats (usually FLAC) to MP3 format and plotted onto a Google Maps interface, embedded into the UKSM Web site. Total 2,000 recordings had been uploaded by 350 contributors up to June 2011 (Rawes, 2011).

In October 2010, the National Maritime Museum and the Citizen Science Alliance launched ‘Old Weather Project’, formerly known as Digitising data for disparate communities: Naval history and climate science. They published the images of British Royal Navy logbooks from 1914 to 1923 and invited public at http://www.oldweather.org with aims to transcribe the weather observations recorded in these logbooks. In Logbooks sailors wrote down temperature, wind and other climate data every four hours. It was quite
difficult to analyse logbooks accurately via computers because handwriting is often confused and misinterpreted by computers, which can lead to errors in the data. Humans are better in reading handwritten text rather than computers. The extracted data from logbooks allowed scientists to reconstruct weather patterns and help them to identify changes in the earth’s climate over time. The project was completed in July 2012, total one million logbooks pages were transcribed and 1,659,212 new weather observations were generated with the help of public (Zooniverse Project Blog, 2010-2012).

‘Wiki Loves Monuments’ was a photo contest for European monuments to discover the heritage nearby you! initiated by Wikimedia throughout Europe in 18 countries in September 2011 in which 5000 volunteer participated by submitting about 1,72,278 photos. In every participating country volunteer won nice awards and the best 10 photos in each continued to a European Jury which would select the best monument photos of Europe. Every national contest would result in 10 nominees for the European contest (Wikimedia).

In 2012, Bodleian Library, University of Oxford, made a public appeal to raise £20,000 to digitize almost 1,000 pages of the first edition of William Shakespeare’s plays, known as ‘First Folio’ dated 1623, to make it available on the Internet (CBC News, 2012).

1.32 Cloudsourcing

The term Cloudsourcing seems to take birth from the term ‘Cloud Computing’. In simple words Cloudsourcing is the combination of two terms ‘Cloud Computing’ and ‘Outsourcing.’

According to Jain (2011) “Cloud computing is an extreme form of outsourcing, one in which hardware ownership and operation, software version updating, data storage and backup and occasionally other functions as well, are all outsourced to a single vendor. Cloud computing may be just another form of shared facilities outsourcing, its risks may be more extreme than the risks of earlier forms of outsourcing.”
Janssen defined “Cloudsourcing is a similar trend to outsourcing where 
an organization outsources some or all of its business processes to a third-
party vendor, except that in outsourcing, the company deploys, hosts and 
executes a complete or vertical IT solution onto a public or private cloud 
provider. With the advent in cloud computing and the increasing flexibility of 
different products and services offered under this technology, it’s easier to 
provide a cloud as a service solution, which breaks many of the previous 
barriers in terms of cost, platform interoperability and scalability.”

PwC (PricewaterhouseCoopers a multinational professional services 
firm) (2011) refers to Cloudsourcing “as a process of careful sourcing IT 
(infrastructure and applications) from the cloud.”

According to Ryan Nichols (2009), “[Cloudsourcing] is the natural 
combination of two trends that have dominated how enterprises utilize 
information technology over the last two decades. The first is a shift in how IT 
is architected— from mainframe to client server to cloud-based technology. The 
second is a shift in how IT is sourced and delivered— from a purely in-house 
function to a function increasingly delivered by specialized vendors.”

According to Wikibin, “Cloudsourcing refers to sourcing complete 
solutions to run a business from the public cloud. The solution provider that 
offers Cloudsourcing products or services is called "Cloudsourcer". The 
Cloudsourcer typically provides solutions by knitting together cloud 
applications, cloud platforms and cloud infrastructure.”

Hence, Cloudsourcing is a general term for anything that involves 
delivering hosted services and IT resources over the Internet, as opposed to 
hosting and operating those services and resources locally, such as on a college 
or university network.
1.3.21 Types of the Cloud Sourcing

In cloudsourcing the cloud service provider allows users to use the infrastructure, hardware and software as a service via World Wide Web on a pay-per-use basis. Cloudsourcing is broadly divided into three types:

a) **Infrastructure as a Service (IaaS):** This is the lowest layer/lowest level of cloudsourcing. Infrastructure as a service allows an organization to outsource its IT infrastructure/resources to a cloudsourcer (cloud service provider) to support in its day-to-day operations such as network components, servers, software applications, technical support and storage. Infrastructure is being provided by cloudsourcer as service to the users to use them the way they want. e.g. Amazon Web Services which provides virtual server on request with unique IP addresses and blocks of storage on demand.

b) **Platform as a Service (PaaS):** This is the next level of abstraction. In PaaS cloud service provider (cloudsourcer) provides a special platform to the user where user can build and use their web based applications under the cloudsourcer environment means user does not require to know any programming language, database management systems etc. to run their applications e.g. Windows Azure, Google App. Engine, Facebook etc. This type of cloudsourcing is sometimes referred as HaaS or Hardware as a Service.

c) **Software as a Service (SaaS):** This is the top level/layer of the cloudsourcing. In SaaS applications, software is delivered as service to users, who can access the required programme online by any device. User can use and manage this applications or software easily e.g. email and other services offered by Google-Gmail and Google Docs, Yahoo-Yahoo Mail and Yahoo Messenger etc.

1.4 Conclusion

Recent moves towards outsourcing of library activities and services have come as a challenge to library and information professionals’ values and desires. There were evidences for both encouraged and disheartened
practitioners. As long as budget and staff shrinks, institutions are forced to creatively seek ways to stretch resources. Outsourcing emerged as one of those ways. “Outsourcing is an important tool in the implementation of strategy – it is lived-out change (Petry-Eberle and Monika, 2009).”

Outsourcing practice encourages library and information professionals to replan, renovate, restructure and reengineer their operational processes but also help them to save their money and improve services, increase the quantity of services and improve the quality of the staff and services. However, it also has the potential to go badly wrong when requirements are not clearly spelt out and negotiated by the service seeking libraries. It is a powerful tool when used appropriately.

Libraries work in a continuously changing environment. What they do, what services they provide and how they organize their resources to provide those services, are all subject to a changing paradigm. These changes intend libraries to shift their focus and outsource some of their activities and services. Outsourcing is neither good nor bad in itself. The outcome is determined by how it is managed from starting to end. Outsourcing is a wonderful strategy for improving both efficiency and effectiveness. Outsourcing is not a bad and not have negative connotations. It should be viewed as a change. It can be a positive way to increase productivity and an opportunity for both personal and professional growth. Outsourcing is here to stay and will continue to rise whether we like it or not.
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