



Information Sector as Economical Category

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INTRODUCTION

About at the break of sixties and seventies of this century the first functional and publicly used information system developed from originally experimental and non commercial applications of computer technology in storing and retrieval of document records. At the beginning these were mostly parallel editions of bibliographies in both printed and magnetic format. Thus developed on one hand data bases of national bibliographies derived from the MARC project of the Library of Congress and on the other hand special and specialized data bases such as CHEMBASE, INSPEC, ERIC or WPI. At the same time important commercial online information retrieval service centers, DIALOG, ESA-IRS, DIMDI, STN and others were beginning to operate. Also at that time thoughts about delineating new branch in world economy "the information sector" were springing up.

Information services then became relatively fast an economical sector. Investments into computers, telecommunications, and also personnel grew rapidly in organizations which undertook business in the field of information services. These then ranked between the most successful enterprises according to statistics reporting the annual growth of business turnover, and also of financial gains. These were on one hand the producers of data bases and on the other hand vendors of online retrieval services. This enterprising is at all times characterized by globalization of markets, and also by investments into research and development because the innovation cycle is exceptionally short and the competition great. All mentioned signs of this type of enterprise caused the creation of what is today described as INFORMATION INDUSTRY. We do not mean by that an industrial production of information technology but rather the industrial character of providing information services.



INFORMATION INDUSTRY AND MACRO ECONOMICAL CONCEPT

The foundation of information industry is traditionally formed by systems of services in the field of scientific and technological development and its economics. These are services which have developed from traditional library services, active in both science and culture. Today's complex conception of information industry adds first of all category of generated and retroactively effective in the process of economical management, social management, further so called news information, and information of daily need in public and private life of individuals.

As any other industrial field, so does the information industry has its own economy. After economy of "factory smokestacks" and mass, assembly belt production, comes according to Alvin Toffler so called symbolic economy. Author follows the thesis that such a great switch of most new opportunities from the sector of material production into the sector of creation of information, and this process taking place not only in rich industrial countries but even in semi developed parts of the world such as we witness now, does not require detailed statistical studies in order to realize that society is changing from industrial to post industrial. The terms "post industrial society and "information industry" are usually used in connection with the problems of "information society".

The dependence of today's world economy on information and telecommunication technology (ICT) evokes ever increasing dependence and interconnection of universality in economic and information sector. These which gradually merge into one "information system". In order to understand this phenomenon we even may use Vickery's already classical definition of an organization of people, materials and machines serving the transmission of information from one person to other.

While philosophers and sociologists talk today in connection with application of new technologies and of organization of knowledge, about post industrial, respectively information society, Peter Drucker for example promoted at the end of eighties the term " post business society" to describe the coming level of civilization in developed countries, and was comparing like Toffler, the importance of information wave with industrial revolution.

Democratization in access to information naturally leads toward democratization of rules and regulations in enterprises. Already in the second half of the seventies a discipline called information economics was developing in United States. In their pioneer work some economists, such as Marc Porat in his work "Information Economy: Definition and Measurement" begun to question not only to what degree information profession participates in the total professional spectrum of the labor active society, but also begins to define types and kinds of employment positions of which the whole information field is composed of. Besides the agricultural, industrial, and the service sector, the information sector was also defined. From the approach and definition, whether of the categories of work performance, or professions and kinds of employment which belong into this sector, and which economists selected as one of less differentiated from the macro economical research of main streams of 20th century development, it is clear that it is impossible to clearly define boundaries between activities which we include in this sector and other social activities. Nowhere it is specified what kind of information is included in these thoughts. Actually it is not even possible. The main goal of the social economic studies in this direction is following the developmental trends of

society as a whole and from the resulting tendencies (not from exact statistical numbers) derive strategic economic reflections. Therefore the individual authors, although they differ in various aspects of definition of the contents of information sector, they basically arrive to same conclusions. Mostly they deal with macro structures and so called big numbers, while they do not differentiate the important specifics of following trends of information activities from other viewpoints such as individual information services, individual technologies, different users needs to information systems access.

Let us try to outline the information sector by wider information fields which it is possible to differentiate either from the view of reasons and goals of information activities, or from the view of their institutional base.

INFORMATION CIRCUITS OF THE INFORMATION SECTOR

The term "information circuits" must be regarded as a proposal of a certain convention. From the first half of the seventies it enters the subconscious not only of the expert public involved in different aspects of information activities, but also of the managers on different levels. Often is the information sector identified with only one of its components. From the viewpoint of econo-political organization and management prevails the understanding which stresses the importance of mass media, the problems of public informations, and the question related to mass media and related activities. From the point of view of development of science and technology and generally of the whole tertiary sphere, the field of scientific, technical and economical information, including library activities prevails in the understanding of the public information sector. From the management point of view this sector includes together with all aforementioned activities also information operatively functioning in management of all kind of business enterprises and activities.

For the purpose of researching the coherence of the development of information industry the entire information sphere can be divided into six basic sections. The main principle of this division, as it is applied in the systems of information and library education in masters and doctoral studies at the Institute of Information Studies and Librarianship, Faculty of Philosophy, Charles University is a functional division of individually different but often closely related information sections which can be identified in the present developmental stage of the whole information sector. In this manner it is possible to define the following six sections: mass media, archives, public management, economic information, scientific and technical development, and cultural information circle.

1. Mass media section

This section of the information sector is pragmatically aimed at providing information in its most general sense and that without regard to professional to professional background of users (in this case more accurately consumers) of information, and their social standing. From the institutional point of view all news agencies belong into this group: the daily press and popular magazines, radio, television, newsreel, However also information services dedicated to public use such as video text, its present formats on Internet and its multimedia environment of www belong here.

To make public - is the main reason for this activity and for outlay of funds to support information services in this section. Organization, methods, technology and the processing techniques and dissemination of information are part of this. And of course also the formats by which the individual information systems are presented are to be considered within this section. It concerns formats of maximum understandable expressions and information dissemination. In some cases artistic formatting of contents is used to be transmitted by information channels in order to influence the recipients of these information.

2. Archival collections information section.

In contrast to the first section it is possible to specify this section from a number of viewpoints - final delineated field of methods and means effective on the average in a whole scale of social activities. Archives organize the information collections first of all to protect the contents and only secondary they allow selected access according to special information needs. Part of this section understandably belongs to non-public information services, however substantial part of archive and documentation can be included in the public information sector.

Main mission and reason for existence of these information activities can be simply expressed in one word: to preserve. All methodology and working techniques with information in this section is subordinated first of all to preservation and safeguarding of information documents, and also to the fact that any of the documents are retrievable and accessible at any time regardless of the time element connected with the origin of the information.

3. Public management information section

Considering the developments in the major part of the world toward democratic government and increasing participation of public in the management of state and also regional affairs, this section concerns more and more information of public type. Furthermore this information section grows in the last year into the field of administrative information.

Main aim of information activities and reasons for creation and maintenance of different systems and services within this information section is to secure qualified means of management of complex social economic and political systems, functioning of course on democratic principles in the environment of economical market relations.

4. Economic information section

The nucleus of information activities in this section is to support enterprising. Both from the angle of securing information for enterprise subjects in their system surroundings (that is supply and market areas), and also from the angle of the consumers providing information on goods which the enterprise sphere offers. Typical information activity which represents ever growing part in this information section is the management information system. Traditional fields of this section are stock market information, company and so called office information systems taking a maximum advantage of online information services, and paperless business and banking communication.

Here belong the macro economical indicators just as well as analytical indicators of company management. Furthermore there is a growing number of data bases containing detailed data on economical subjects, beginning with their names, addresses, names of company officers to a detailed listing of products and their parameters, or services which they provide.

5. Science and technology information section.

The term "scientific and technical information" (although sometimes named differently) is understood worldwide as complex of traditional library and bibliographic activities together with additional research and analytical activities serving primarily all creative activities, such as research, development, construction (design), education, health care, but also strategic management, prognosis, and planning. Information methods derived from services of special libraries, research libraries, academic libraries, information and documentation centers pass through all special activities and serve to elevate specialized levels of methodology and technology of providing information services in all other information sections. Very specific sign of this section is a strong orientation toward documents as a main source of information. Their collection, storage, and access by way of loans does not have analogy in so far characterized information sections.

The main goal of the processing activities and services of this information section is to support development of science and technology. The outstanding characteristics of this of this section is its mostly international level, just as international in character is the science and technology.

6. Cultural and art information section.

Without doubt activities which secure safekeeping and access to artistic works of all kinds and to other cultural properties belong to this information section. Presently the sphere of traditional public libraries with predominance of artistic, cultural, and general educational collections in form of printed materials is being widely unfolded. Thanks to Internet, systems are being developed which make encyclopedias, picture catalogs and reproductions of work of art accessible through the computer networks. Computer technology is the base of videotheks, phonoteks, and it takes its place generally as a foundation of information methods for accessibility of collections of these libraries. Besides computer media offering culture and art, audio recordings, video recordings, and optical discs are at home at the libraries for some time. These are made accessible to users of institutions in same manner as books and periodicals. Accessibility of culture to wide public in full meaning of this term is also the basic factor of this information section.

CONCLUSION

The developmental tendencies of society today are generally connected with information activities. We believe that it serves a purpose to categorize these activities and by that increase possibilities of an analytical view of resolving problems of present development of information sector and its increasing importance in economics and politics of this world. In this spectrum of opinion it is possible to underline those fields of information activities which from the viewpoint

of researching actual connections of technological development and democratization of access to information are acceptable for the outlined views of these sections. The outline of the section boundaries may be only a framework without defining the definite borders but rather watch for their overlaps and mutual relations.

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