

Infonomics and The Value of Information in The Digital Economy

Abstract

Globalization and integrated development of the economy significantly expands the possibilities of business. The world has entered a new digital epoch: here the activity of the organizations is mainly in the production and use of information technologies and accumulated information to make all other forms of production more efficient and thereby ensure a new quality of economic growth, and creating greater wealth of information (information products and services). Distinctive feature of a new science "infonomics" is: information obtains a measurable economic value and other features that qualify it as any other kind of asset, significant strategic, operational and financial reasons to do so exist. It is noteworthy that the information may meet accounting standards, but nevertheless it is not reflected in any public balance sheet of a company. Based on the data obtained during the research the author comes to the conclusion that the era of major information transformations in order to remain competitive and profitable, management of the enterprises must learn to use the information of their companies to create new products and services or even a new market. The results of the study expand the notion of infonomics: shows the methods of accounting information as well as factors affecting the information assets and their economic value, noted that infonomics it is a discipline that deals with the determination of the value of information, however, at present this phenomenon raises more questions than it answers, but the more interesting it becomes his study.

1. Introduction

In the digital economy, information is digitized and transmitted via digital networks, a new world of opportunities appears for business development. The widespread introduction of advanced information and digital technologies have the strongest influence on business, not only in Russia but also all over the world. More and more people and businesses are being introduced into the new information space. Huge amount of information can be compacted and imparted at high speed anywhere in the world. Various forms of information can be combined creating, for example, multimedia documents and etc. Information can be stored for a very long time and it provides instant access to most of the information recorded by human civilization. New digital devices are created so that they can fit in your pocket (or even smaller), it's very important and has a huge effect on most aspects of business and personal life of a modern man. Nowadays information is valuable to your company, as well as funds. Information is a very specific item because you can buy or sell it avoiding dozens of countries and customs, as well as use it for your business growing.

Already one can highlight a few hosting providers offering services of information data storage in so-called

"cloud storage." In the period of large data transformations, a business has to ask: How can I use my company's data to create new products and services? How can I collaborate with other organizations to share information on a new business project? How can I enter a new market or even create a new market using company's information data?

2. A brief review of the companies, which use information to create new products and services.

The art of effective business management today is in successfully combining of the latest modern

information technology, information, and in the ability of rapid mobilization of these resources for the company's accelerated development. Information and information technology are used in all economy sectors, somewhere in greater extent, somewhere less, but the fact is that they are used. Their effective usage allows companies to be competitive. Those who do not use all the possibilities of information and information technology will be forced to leave the market. During the study we tried to identify several key sectors of the economy and the ways of information and information technology usage to create new products and services in these sectors.

Companies in every sector of the economy desperately try to use the information to improve their business. But while the race is on the information usage between companies, a large piece of information assets is invisible on corporate balance sheets due to the fact that the information is not an asset. This discrepancy sometimes leads to a deadlock legal systems around the world and prevents the company to manage and use their information as one of its assets. Question of the economic value of the information is in the spotlight after the terrorist attacks of 9/11. Many large companies have lost valuable data of their business, insurers compensated the cost of hardware and material assets but the data was not of value.

3. Literature review

The term infonomics has been coined to convey the underlying value of information in terms of its production, market demand, and economic impact (Regazzi, 2013).

In reviewing the literature on infonomics, it was found that in the early 1990s in the U.S., analyst Doug Laney introduced the concept of «Infonomics» to describe their own research around quantify information evaluation, its cost and definition of information as a real asset of the enterprise (Laney, 2012). This concept has been emerged from the work of Laney with data storage pioneer Prism Solutions (now part of IBM), where he and his colleagues have developed testing methods for qualitatively and quantitatively evaluating the quality characteristics of the original data and the potential cost of the business. It is assumed that the data is valid when it is used in decisionmaking, infonomics says that information should be considered as an asset.

Gartner has developed a set of tools for creating the cost of information, and outlined that the assessment will be made as individual records and as the usage of different criteria (completeness, quality, uniqueness). Data set, which is owned by a company and not available on the market, has a higher value.

Bannister (2013) in his report «Accounting for the value of (big) data» noted that some European companies are able to use the knowledge which is gained from the analysis of large amounts of data to improve customer relationships, rationalize production and new product development. Since the information provides potential future economic benefits, it should be treated as an asset of the company. Information has always been a valuable asset for those who possess it (Bannister, 2013). It is noteworthy that all production besides kilowatt power consumption and tons of steel consumes a lot of megabytes of information and still unknown how much. Getting in the product information does not disappear - because we can always remove it back, measuring and examining the item (Branscomb, 1994).

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4. Conclusion

It is necessary to carry out very large-scale studies for infonomics to become clear to everyone and start to work, however today this sphere becomes the subject of numerous studies. The results show that the information is processed by enterprises within a wide variety of systems, often unrelated to each other. Ensuring their wide availability for all employees (as well as external partners) and thereby facilitating the adoption of creative solutions can be a critical success factor for many businesses. Nowadays the trend of information importance growth is evident: leading organizations in almost every industry - including retail, financial services, manufacturing, construction, education and telecommunications - understand the benefits of information in the income formation and sometimes even more important than some traditional assets. Although many modern business leaders and IT leaders recognize the growing importance of information still they do not consider it as one of the business assets to be assessed. Based on the data which is received during the study, it is logical to conclude that in the era of large data transformations in order to remain competitive and profitable, management companies must learn to use the information to create new products and services or even a new market. It should be noted that the information becoming important productive resource, turning into the products, the final result of the production process, has appeared to be also unlimited resource, but at the moment modern businesses do not "see" the information as its asset. Considering the information through the prism of economic value one can provide some interesting future directions for the "digital economy." One of the ideas is the emergence of so-called "information banks", which will provide the same services for the information assets of enterprises that conventional banks provide for financial assets. Already one can highlight a few hosting providers that offer storage of information data. In our opinion, in the nearest future such services sector will grow rapidly. A vast field of research is the study of dynamic and highly relevant theories of Infonomics. How will this science develop in our country and abroad? How does it affect the operation of modern enterprises? At the moment the phenomenon of infonomics puts more questions than answers so that it becomes more and more interesting to study it.