

INFONOMICS: A MORAL SCIENCE

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Abstract

Information, networks and Information Technologies are becoming more and more important in our daily lives. Being either a company, a consumer or a government organization we are all challenged by rapid developments in new technologies and how they are affecting our collective and individual behavior. Infonomics is one of the few branches of study in the world that focuses on information and information technology from an economic and business perspective. On building a strong theoretical foundation in economics and business, Infonomics deals with the nature and impact of information, networks, and information technology on our society. Neither of the components of Infonomics, viz. 'economics' nor 'information technology' are new to us. The only thing new is the way to look at society. It works as a moral science in this so called 'giraffe world'.

1. Introduction

Information, networks and Information Technologies are becoming more and more important in our daily lives. Being either a company, a consumer or a government organization we are all challenged by rapid developments in new technologies and how they are affecting our collective and individual behaviour. Information and Network Economics is one of the few branch of studies in the world focusing on information and information technology from an economic and business perspective. Building a strong theoretical foundation in economics and business, one acquires the knowledge of the nature and impact of information, networks, and information technology on our society.

2. Practical Experience

Information and Network Economics is one of the few academic programmes in the world to combine economics and business, with a focus on information technology. Having the theoretical knowledge and practical skills to be able to cross these disciplines is becoming increasingly important. This is because Information and Communication Technologies

(ICTs) are developing rapidly and companies often do not know how to keep up with them or how best to integrate them for maximum productivity and performance. Information and Network Economics will equip you with the theoretical and practical skills to develop policies and strategies that address ICT challenges in a business environment.

Alongside the theoretical aspects of this discipline, Information and Network Economics also has an important practical component. This includes regular presentations, group work and the study of academic papers. The latter requires critical thinking and the application of the theory that have been learned. One has to demonstrate the methodologies and whether the results are the same as those in the papers. This is excellent preparation for the real-life problems that are encountered in our future career.

3. What is to be learnt in these disciplines?

Due to its multi-disciplinary nature, Information and Network Economics will challenge us both intellectually and practically. One will learn to think conceptually about information technologies and their impact on business productivity and profitability. You will also understand more widely how information affects markets. On a more human level, you will be able to define and measure different kinds of capital, such as human and information capital, and analyse how new technologies are perceived by and can benefit individuals and teams. At the end of the programme, one will be able to:

- think conceptually about information technologies and their impact on productivity and profitability;
- understand the economic nature of information and of information networks;
- understand how information affects markets;
- critically analyse complex economic and business problems;
- apply the theory you have learned in innovative and practical ways.

4. Career Prospects

There is a huge demand for specialists who can develop policies and strategies that address new information technology challenges, while having leadership experience. The ability to deal with these technologies and

understand what they mean for individuals, companies and society is a much-needed skill.

Graduates find positions as:

- IT consultants
- Business development managers
- IT Managers
- Policy advisors
- Researchers

at:

- consultancy firms, such as Capgemini, KPMG, and Accenture
- large multinationals, such as Shell and Philips;
- IT firms, such as SAP, Google and Microsoft;
- new media and telecommunications companies, such as Vodafone and Deutsche Telecom;
- Universities and other research institutes
- Governmental and non-governmental organizations

5. INFONOMICS: The Practice of Information Economics

Today it's very likely that business and IT leaders regularly talk about information as one of your most valuable assets. But do we value or manage information like one? Consider your company's well-honed supply chain and asset management practices for physical assets, or your financial management and reporting discipline. Do you have similar accounting and asset management practices in place for your "information assets?" Not likely, but no worries, few do.

When considering how to put information to work for your organization, it's important to go beyond thinking and talking about information as an asset, to actually valuing and treating it as one. This is the basis of the new theory and emerging discipline of Infonomics which provides organizations a foundation and methods for quantifying information asset value and formal information asset management practices. Infonomics posits that information should be considered a new asset class in that it has measurable economic value and other properties that qualify it to be accounted for and administered as any other recognized type of asset—and that there are significant strategic, operational and financial reasons for doing so.

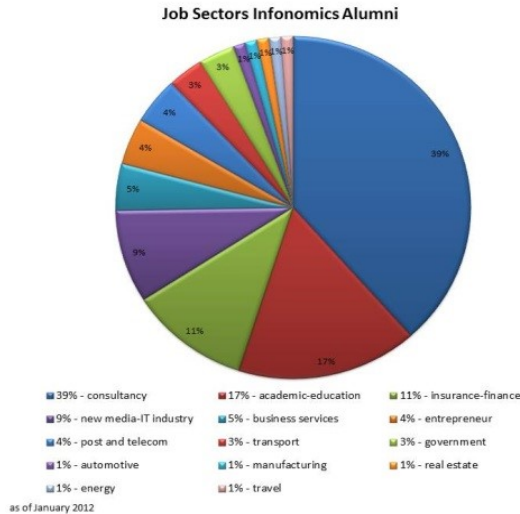
6. The Value of Information

Infonomics is recent term to describe the study and emergent discipline of quantifying, managing and leveraging information as a formal business asset. Infonomics endeavors to apply both economic and asset management principles and practices to the valuation and handling of information assets. The word is a composite of “information” and “economics.” Although information arguably meets accounting standards criteria for an asset, and more specifically, further litmus tests for an intangible asset, it is not found on public companies’ balance sheets. Regardless of what our 75-year old accounting standards dictate, if you’re not quantifying information’s value then you’re not likely to be generating or demonstrating sufficient value from it. Nor are you reaping any of the other potential benefits from quantifying information’s value. While involving the CFO in valuing your company’s data may be premature, doing so may also assist him or her in demonstrating overall corporate wealth and health to the board and investors. Even non-economic indicators of information value, quality and performance can help IT organizations and businesses set a course for better managing and leveraging information. In fact, organizations that are intent on becoming more information-centric, as well as those that have altogether information-based business models, should make it a critical function to audit the actual and potential value of their information assets.

7. Why Put a Value on Information?

We generally talk about the concept of information in either purely technical or strictly contextual terms. Information is something to be created, captured, updated, stored, moved, arranged, integrated and ultimately accessed, used (or ignored) and retired. Beyond its technical manifestation, however, information means something. It has context, particularly when applied. It is a message, an event, or a unit of knowledge. Yet information isn’t actually any of those things. Rather, it is merely symbolic of them — a proxy. While the meaning of information ultimately drives business processes and decisions, it is the increasingly efficient, neat and compact way with which we can technically represent information that allows its near-unfettered flow and accumulation. Therefore, it is both information’s meaning and physical representation that combine to improve business process performance, decision making, and innovation. Organizations whose business and IT leaders recognize this cycle and the growing importance of information are better positioned to take advantage of it. Information should no longer be seen merely as an operations by-

product to be managed, or even as just a business resource to be leveraged, but it should be seen as an enterprise asset to be valued. Leading organizations in nearly every industry — including retail, financial services, manufacturing, life sciences and telecommunications — recognize information’s benefits, sometimes even above some traditional assets, in generating revenue.



8. Information is an asset

The primary principle of infonomics is the recognition of information as an enterprise asset. Although generally accepted accounting principles (GAAP) as yet do not require the reporting of information assets on the balance sheet, infonomics deems that organizations acknowledge that information is more than merely a resource.

9. Information has value

While it is generally accepted that information has value when used in decision making or to fuel business operations, infonomics posits that information, just as GAAP-recognized assets, has a definitive value even when not in-use. The accounting definition of a balance sheet asset being an item of ‘‘probable future economic value’’ applies as well to information. Information's value can also be determined in terms of its realized value and potential value.

10. Information’s value can be quantified

Similar methods for quantifying the value of accepted intangible assets can and should be applied to valuing information assets. These valuation

(finance) methods include as applicable and relevant: market approach, the cost approach, and the income approach. As well, non-economic valuation methods that quantify information's relative value, business process relevance and data quality-related value have application in helping organizations make strategic information-related IT and business decisions. Doug Laney has developed both economic and non-economic information valuation models which he has deployed for clients and lectured on at various business schools.

11. Information should be accounted for as an asset

Although information is not yet a recognized balance sheet asset, organizations should consider it one for internal reporting purposes. This includes applying valuation methods on a scheduled basis and when a given information's value may be impaired, and internally reporting information asset value on a supplemental balance sheet.

12. Information's value should be used for budgeting IT and business initiatives

IT and business related initiatives that leverage or secure information assets should be budgeted against the quantified economic value of the information and the cost to acquire, administer and apply the information. Currently such initiatives tend to proceed without this degree of fiscal diligence.

13. Information's realized value should be maximized

Infonomics valuation exercises typically disclose that information is a vastly underutilized asset and that organizations should consider opportunities to improve their capture and deployment of information in generating top-line and bottom-line benefits. This includes decision-making, business process automation, innovation, and even the packaging and direct marketing the organization's information assets.

14. Information should be managed as an asset

Traditional physical and financial assets have a definitive lifecycle and procedures for their effective handling throughout. Infonomics principles suggest that organizations should apply their own expertise, policies and practices in asset management toward the management of information assets.

15. Potential benefits of Infonomics

Benefits of applying infonomics principles and practices include but are not limited to:

- Improving the collection, management, governance and usage of information throughout the organization
- Instituting an organizational culture that values information to the fullest extent
- Quantifiably justifying and validating the ROI of information-related business or IT initiatives
- Determining how much to spend on information security for each class of information asset
- Being able to claim (or assessing) a premium corporate valuation during mergers and acquisitions negotiations
- Assessing contract risks due to their lack of or inclusion of indemnification against the loss, damage or misuse of electronic data
- The future potential for securing loans using information assets as collateral
- Improving the organization's ability to trade its information assets for goods or services
- Improving relations with customers, employees, suppliers and partners by sharing more and improved information with them
- Improving the organization's ability to package and market information assets as a saleable product
- Encouraging internal ownership and stewardship of information assets

16. Conclusion

Information, networks and Information Technologies are becoming more and more important in our daily lives. Being either a company, a consumer or a government organisation we are all challenged by rapid developments in new technologies and how they are affecting our collective and individual behaviour. Infonomics is one of the few branch of study in the world that focuses on information and information technology from an economic and business perspective. On building a strong theoretical foundation in economics and business, Infonomics deals with the nature and impact of information, networks, and information technology on our society. Neither of the components of Infonomics, viz. 'economics' nor 'information technology' are new to us. The only thing new is the way to look at society. It works as a moral science in this so called 'giraffe world'.