

## Infopreneurial Behaviour among University Graduates in the Information Science Faculty of a University in Zimbabwe

Rodreck David

National University of Science and Technology, PO Box AC 939, Ascot, Bulawayo, Zimbabwe,

Contact: [rodreck.david@nust.ac.zw](mailto:rodreck.david@nust.ac.zw)

Adock Dube

National University of Science and Technology, PO Box AC 939, Ascot, Bulawayo, Zimbabwe,

Contact: [adock.dube@nust.ac.zw](mailto:adock.dube@nust.ac.zw)

### Abstract

*Infopreneurial behaviour amongst University graduates has the potential to guarantee employment and bridge the gap between job-security and the perceived insecurity of an information business. At present, the National University of Science and Technology in Zimbabwe offers infopreneurship and entrepreneurship courses to students in the faculty of Communication and Information Science. The course content and presentation are similar in nature as they all relate to the selling, marketing and promotion of information products and services. However, little research has been done to find out the impact of this course in creating an infopreneurial behaviour among graduating students. The researchers conducted a questionnaire-based survey to find out the infopreneurial behaviour among students who graduated from 2008 to 2012 in the faculty. The exploratory investigation reported by this paper presents the status of these graduates in utilizing their acquired knowledge in infopreneurship and entrepreneurship with regards to the selling and marketing of information products and services, especially through small physical or online/internet-based businesses. The major finding of this study was that the students between 2011 and 2012 have been making initiatives to establish internet-based information businesses but lack further business and technical skills necessary to translate these initiatives into 'real' businesses. These business and technical skills are lacking in the course content. The researchers conclude by making recommendations on possible adaptations that can be introduced to the courses to improve infopreneurial behaviour among graduating students in information science.*

© 2014 Infopreneurship Journal

---

**Keywords:** infopreneurship, infopreneurial behaviour, Zimbabwe, graduates, information science.

### **Introduction**

Young people's potential to create outstanding information-content businesses relies on their education, which informs their behaviour as they engage in the information business. University education is a typical platform for imparting knowledge to learn infopreneurship to start viable infopreneurship businesses. This study investigates the infopreneurial behaviour amongst University graduates whose programmes cover courses in infopreneurship at the National University of Science and Technology in Zimbabwe. These programmes are: Records and Archives Management (RAM), Library and Information Science (LIS), Publishing and Journalism and Media Studies (JMS) students in the Faculty of Communication and Information Science.

### **An Infopreneur**

An entrepreneur is generally identified as a person who has qualities, attributes and competencies that promote creativity, innovativeness, risk taking, positive thinking; driven by the urge to fully utilise available opportunities and resources to achieve imagined targets that are not normally envisioned by others (Garnsworthy 2009; Chandler 2006). Infopreneurs however, are entrepreneurs who identify opportunities for creating enterprising information-based businesses by identifying knowledge deficiency situations and selling target-based information products and services, mostly through the internet. Infopreneurs are defined as curious enthusiasts who have the adventurous and driving urge to undertake intelligent searches on wide ranging information (re)sources and to be able to evaluate, repack and determine the significance, relevance and value of information and information services which they then sell using internet tools to facilitate and enhance their business (Infopreneur FAQ 2011).

Infopreneurs understand and keep abreast of the developments in information and communication technologies, and information business systems in order to identify and access relevant sources of information, knowledge and understanding, target markets, pricing models and relevant customer network trends. Selection, repackaging, sifting, promoting, and distributing knowledge, usually within a niche market is the business of infopreneurs (Coulson-Thomas 2001a). Infopreneurs are profit-oriented, enterprising, business people running internet-based businesses that enable them to sell their expertise to a world-wide audience, by packaging and marketing their knowledge as information based products, online services, and premium consultancy.

### **The Current “Information Age”**

Most scholars (Garnsworthy 2009; Coulson-Thomas 2001a) concur that the current information age characterised by the abundance of information is a typical experience of an information society, particularly in countries where increased access to digital applications and instruments are enhanced across society. The information society is characterised by the availability and accessibility of information, bringing about the existence of information entrepreneurship within the society. It also comes

with extreme reliance on Information Communication Technologies (ICTs) tools such as computers and their networked environment, which facilitates information flow.

### **Why Infopreneurs?**

One scholar (Coulson-Thomas 2000a) posits that “so much information is available that busy people struggle to keep up with the flow.” With the advent of the internet, consumers want to access accurate and usable information instantly. Yet most do not have the time, skill and resources to make an accurate search from the myriad of content hosted by websites on the internet. To fill these needs, information entrepreneurs arrange and organise information, making it available in a logical manner. Consumers want to access information that is systematic and in order - the right information at the right time. This is becoming even more critical as new ICT gadgets for information communication, dissemination and consumption are being produced for business and personal use. As noted by Coulson-Thomas (2000b), “increasingly, people are demanding tailored packages of information that are relevant to particular requirements issues, or decisions.”

The above discussion also points to the rising need for skilful infopreneurs that are able to mine web content for information required by clients from diverse backgrounds. These skills further relate to the following:

- Design of websites, analysis of web-content;
- Appreciation of web-development software;
- Understanding consumer behaviour;
- Business skills, acumen, and shrewdness;
- Presentation;
- Design of small business proposals, budgets and plans;
- Ability of search for small-business funding; and the
- Ability to deal with intellectual property issues (Copyrights and Neighbouring Rights Act [Chapter 26:05]).

Therefore, to meet the informational needs of the consumers, there is a need for infopreneurs whose cognitive and technical skills enable the matching of needs and required resources.

However, enterprising infopreneurship requires individual drive and will rather than collective understanding (Shane, 2003). There is therefore a need for individual dedication on the part of information entrepreneurs on top of the expertise they have in the information management world. The need for information products and services is high; therefore meeting such an increasingly rising need requires dedication at an individual level. Through the above discussed points, the existence of information entrepreneurs is vital in realising the informational needs of consumers.

Since The information age is characterised by massive amounts of information being available and accessible. While this is an advantage in terms of accessibility of information, it poses a challenge to the users of information. Consumers are exposed to all types of information, including much that may not add value to their information needs. It is therefore important to have information entrepreneurs to help filter the available information, weeding out what is relevant to consumer needs and screening out information that is not fit for the target markets or for public consumption in general. Information entrepreneurs have an important role to sift, screen, sort and present information in a way that is relevant to different sectors of the economy (Kefela 2010).

### **Educating and Training Infopreneurs**

Infopreneurs also play a crucial role in facilitating the dissemination of information. Information entrepreneurs should be created, developed and supported so as to seize and take advantage of opportunities (Coulson-Thomas 2001b). This development and support can be achieved through education and training (Coulson-Thomas 2001b). Therefore the education of infopreneurs is important in shaping a competitive information business and guaranteeing career opportunities for graduates in information science (Coulson-Thomas 2001b). Education can come in the form of formal schooling in University and College courses offered in Information science programmes. Training is somewhat different from education. It is a unique hands-on experience that infopreneurs require in order to fully utilise cognitive or intellectual skills acquired during education sessions. As the characteristics of information products differ from manufactured goods, there is therefore a need for skills and training which are tailored for information products (Ngulube 2011). Skills and competencies required to exploit information products are also different from those associated with manufactured goods, (Coulson-Thomas 2001a) and therefore different forms of relationships have to be established and sustained.

Therefore academic institutions should consider including in their curriculum, courses that will enable the information entrepreneur to adopt skills that will enable the information entrepreneur to exist in the market and meet the ever rising need for information. One scholar (du Toit 2000) particularly points out that “educators, trainers and developers should establish what needs to be done in terms of course provision, competency assessment and learning support to produce information entrepreneurs”. On that regard, educating information entrepreneurs is key in realising the enormous potential that exists in the information products and services market.

Several studies (du Toit, 2000; Kefela 2010), show that most training and development inputs do not reflect business priorities or result in new strategic capabilities and intellectual capital. There is therefore a need for training institutions to recognize and address this. Entrepreneurs exist to provide services and goods to consumers at a profit, thereby creating employment in the process. It is therefore necessary to direct priorities to the profit making aspects of every training programme that is run.

### Infopreneurship as a Subject

Information, the essential ingredient in today's knowledge-based economy, is dynamic, expensive, and continually being reconfigured and repackaged (Stiglitz 2010). Enterprises are prepared to pay for information that will enable them to increase their profit margins and remain ahead of their competitors. A wide variety of enterprises and individuals have seized the opportunity of turning information provision into a successful commercial venture. Although a few of these ventures have come from libraries, the majority have originated from the business sector. Many of these businesses provide the same type of information provided by libraries, whereas others provide information which libraries have either ignored in the past, or which they have regarded as being of no real value. Effectively managing organisational information and knowledge provides information professionals with the key to personal and professional competitive advantage.

Today, information specialists are compelled to use new skills and strategies in order to change, survive, and continue to compete in the world of virtual information. Weitzen identified six ways in which infopreneurs generate, organise and disseminate information profitably. These are broadly accepted by different researchers as the way to operate infopreneurship (Shapiro and Varian, 1999). One researcher (Weitzen 1998) identified six important aspects of profitable infopreneurship, shown in Table 1.

**Table 1. Six ways in which infopreneurs generate, organise and disseminate information profitably**

<b>Leveraged information:</b> Infopreneurs make use of databases or the internet to obtain general market information and support data for research, as well as for the creation of marketing plans, pricing strategies, distribution channels and advertising programmes.
<b>Customised information:</b> Information that is synthesised and tailored to the user's needs. This included the manipulation of information into a format that is easily understandable (e.g. computer generated graphics).
<b>Facilitating access to information:</b> The information explosion of the last few years increased the need to find the right information in a timely manner. The gap between information produced and information consumed continues to widen, because of the rapid developments taking place today. One solution to this problem is electronic access to information, because this allows infopreneurs to access desired information, select what is valuable and, finally reconstruct and disseminate information selectively to clients.
<b>Speeding up the flow of information:</b> The time-sensitive nature of information requirements ensures a high demand for the speeding up of the flow of information. Today infopreneurs are capable of generating, sending and receiving data virtually instantaneously via the World Wide Web, from and to remote locations thousands of kilometers away.
<b>Repackaging information:</b> The process of repackaging information includes the organising of information into new information products and services. The goal of repackaging information is to locate unrelated and yet possibly relatable information and create new products combining the information.
<b>Around the clock delivery of information:</b> As computers begin to substitute human effort, it becomes possible to deliver information instantly at any time of day or night. This process causes information to take on a value-added quality.

Even though entrepreneurship is wide-spread in the world today, it is still unclear what exactly makes some people good entrepreneurs. However, qualities that are shared by successful entrepreneurs include a need for achievement and acknowledgement, a desire to use their skills to the full, and to be in control of their environment. Above all, entrepreneurs also tend to be those people who are willing to take risks. The past thirty years have seen an enormous increase in the number of universities that started to offer entrepreneurship as a subject (du Toit 2000).

### Research Strategy

The Faculty of Communication and Information Science at the National University of Science and Technology in Zimbabwe has been offering entrepreneurship and subsequently introduced infopreneurship courses to information science students enrolled for the RAM, LIS, Publishing and JMS programmes. Courses include information economics, web content management and marketing of records and archives products and services. The intention has been to equip undergraduates with the know-how and skills to develop as infopreneurs. The Faculty has a business approach in teaching Information Science with the emphasis on information as a resource. The target market is the end-user, that is, any employee or person who needs information for effective decision-making, especially electronic information available on the internet/World Wide Web. Infopreneurship is a semester course in the fourth and final year of study. Students are taught how to:

- Be creative yet practical in their search for business ideas;
- Research their business idea and ensure that it will be profitable;
- Develop information products suitable for the market; and
- Plan the way they will be doing business and handle important issues such as financing the start-up and marketing their products or services.

Students who attended the programme between 2008 and 2012 were asked to complete a questionnaire towards the end of the course. As this was only an exploratory study, no claims of generalising the findings to other universities are made.

**Table 2. Response analysis**

Programme	Sample	Number of Respondents	Percentage
RAM	25	23	92
LIS	25	22	88
JMS	25	20	80
Publishing Studies	25	20	80
TOTAL	100	85	85

Of a sample of 100 students, 85 students (85%) completed the questionnaires. Their distribution is shown on Table 2.

### **An Analysis of the Infopreneurship Course Outline Offered by the University**

In this course, students look at the world of the information entrepreneur, a world subject to incredibly rapid changes in information technology – changes which offer numerous possibilities to people with entrepreneurial skills. This course has two major components: the background of the future information entrepreneur and then a more practical part on the origins, development and management of new business. In other words, they explore possibilities available to learned infopreneurs to start their own business. Table 3 below shows course units adapted from The Department of Records and Archives Management, National University of Science and Technology:

**Table 3. Infopreneurship course units**

<b>Unit 1: The Information World – the World of Information</b> The information era/the information age; The information society; The information professional; The changing world of the information professional; The role of the internet
<b>Unit 2: The Business of Information – New Information Professionals</b> Traditional information work – alternative information work?; Some alternative information professions; New needs, new challenges and opportunities for information professionals
<b>Unit 3: Entrepreneurship and Information</b> Are you an entrepreneur?; Information and entrepreneurship; The information entrepreneur Characteristics of an information entrepreneurship; Opportunities and challenges; Is information entrepreneurship; How do you begin?; Case studies
<b>Unit 4: Starting and Managing a New Business</b> Why and how would I start my business?; Legal requirements; Legal forms a business can take in Zimbabwe; Intellectual property rights; Taxation; Trade licences; Registration with National Social Security Authority (NASSA); Management of new business; Determinants of business survival and growth; Proposal writing
<b>Unit 5: Developing a Business Plan</b> What is a business plan?; Purpose of business plan; To obtain funding; To serve an inside purpose; To be used as a tool for reducing the risk; Who should draw up a plan?; Sections of a business; Problems in developing
<b>Expected Outcomes of the Course</b> After studying this course you should be able to: <ul style="list-style-type: none"> <li>• Conceptualize the current world in which people working with information as a living function;</li> <li>• Discuss the characteristics of an information society and give your own reasoned view of whether Zimbabwe or part of the country, measures up to these characteristics;</li> <li>• Set up an information business; and</li> <li>• Develop a business plan.</li> </ul>

### Findings

#### Infopreneurial activities carried out by graduates

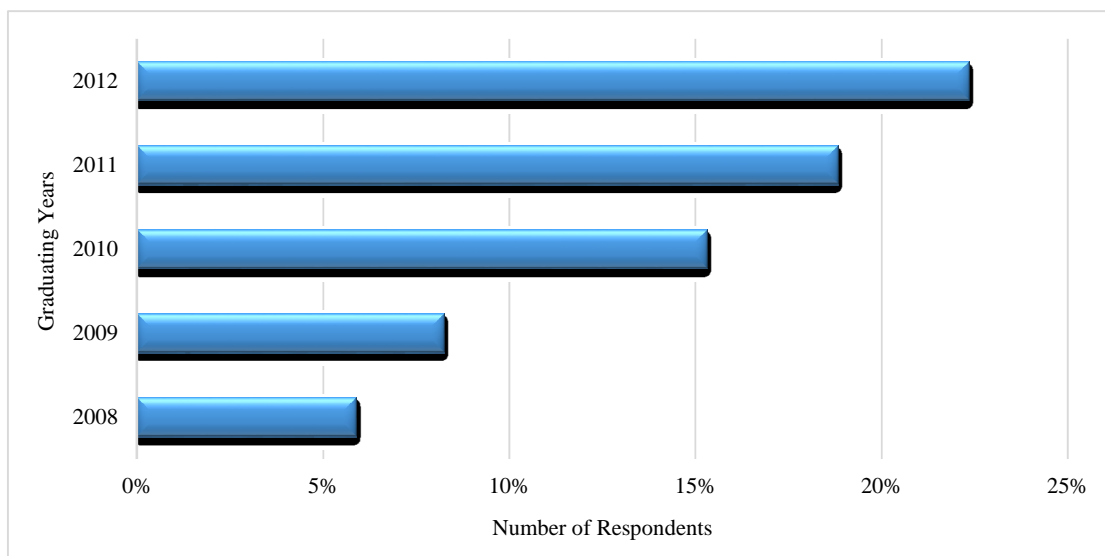
Information gathered from questionnaires regarding the infopreneurship activities carried out by the graduates was collated into categories according to the degree programme and also according to related work activities (Table 4 and Figure 1). Generally, the respondents indicated that they have made efforts at various levels and to various degrees of success in involving themselves or establishing enterprising information businesses in the franchise of the information sector in Zimbabwe.

**Table 4. Infopreneurship activities carried out by the graduates categorized according to degree programme.**

Degree Programme	Activities	Researchers' Comments
Records and Archives Management	<ul style="list-style-type: none"> <li>• Data services involving data analysis, database development and support and designing data capturing software</li> <li>• Website design services</li> <li>• Writing and consultancy in records management research</li> <li>• Records classification and indexing</li> <li>• Registry systems analysis and design</li> <li>• Records surveying</li> <li>• Records appraisal</li> <li>• Automation of records management systems</li> <li>• Web designing</li> <li>• Research assistantship</li> <li>• Freelance teaching</li> </ul>	Whilst most graduates indicate that they are involved in "freelance" infopreneurial activities, they indicate lack of business skills that could enable them to start small information selling/marketing enterprises.
Library and Information Science	<ul style="list-style-type: none"> <li>• Novel, short story, poetry writing</li> <li>• Publishing projects consultancy</li> <li>• Graphic designing services</li> <li>• Knowledge management consultancy</li> <li>• Web/content analyst</li> <li>• Educational publishing</li> <li>• Authorship</li> <li>• Marketing company information products</li> <li>• Book and print media selling &amp; marketing</li> </ul>	These graduates have a high understanding of marketing information products. However they indicate that they fall short on bringing their businesses online and lack funding.
Journalism and Media Studies	<ul style="list-style-type: none"> <li>• Free-lance writing</li> <li>• Paid-Blogging Services</li> <li>• Publishing liaison</li> <li>• Information and documentation officer</li> <li>• Freelance editor</li> <li>• Content cover Designer and Illustrator</li> <li>• Evaluator</li> <li>• Proof reader</li> <li>• Book marketing assistant</li> </ul>	These graduates indicate that starting an infopreneurship business is difficult in their discipline as it requires a lot of capital for license, whilst small online publications do not generate workable financial resources. They also indicate a lack of business skills in starting own enterprises.



Publishing Studies	<ul style="list-style-type: none"> <li>• Services and Products in: Brochures, Fliers, Banners,</li> <li>• Content analysis</li> <li>• Content developer</li> <li>• Freelance writing</li> <li>• Communications design</li> <li>• Print process analyst</li> <li>• Marketing educational materials</li> <li>• Designer</li> <li>• Evaluator</li> <li>• Proof reader</li> <li>• Book marketing assistant</li> </ul>	Lack of funding is pointed out as the chief impeding factor in starting infopreneurial businesses. However it is also important to note that the respondents indicate that “it is practically impossible when one has a limited business skill, even though coming from an information background, to start competitive business.”
--------------------	---	--



**Figure 1. Students Engaged in Infopreneurial Activities**

#### **Challenges faced by graduates in setting up small infopreneurial businesses**

Information gathered from questionnaires regarding the infopreneurship activities carried out by the graduates was collated into categories and presented in Table 5 below.

**Table 5. Challenges faced by graduates in setting up small infopreneurship businesses**

<b>Small Business Skills</b>	<b>Respondents' Comments</b>
Proposal Writing	Never had practical sessions at school (To present it quantitatively) Infopreneurship business proposals are different from entrepreneurship business
Budgeting	70% of the respondents indicate that they find budgeting to be problematic
Funding Options	Apart from indicating that they know about several Government funding options, most respondents are unaware of several external funding options
Legal Registration Process	Two respondents gave a detailed explanation of undergoing legal registration process for their small data management consultancy business now currently registered as ARID (Archives, Records, Information and Data) Consultancy Services in accordance with the Companies Act of Zimbabwe. However, generally the other infopreneurs operate 'briefcase' enterprises that are more informal in nature
Planning	All of the respondents indicate that they have clearly written project/business plans which guide their infopreneurial activities.
Intellectual Property Issues	Information product creators are aware of the bearing of intellectual property on their products, especially Publishing and JMS graduates.

### **Marketing of Information Products and Services**

The respondents were also asked to describe their activities in marketing information products and services. Their descriptions generally indicate that they rely on web-based services to market their products and services which in turn require ubiquitous access to the internet. This is a challenge as most of them indicate that internet connectivity is a problem due to technical resources, electricity and sometimes lack of financial resources to pay their Internet Service Provider (ISP) in time. One respondent further indicated that some of his customers are not based online, and the digital divide between his online marketing strategy and their absence online has affected his marketing strategy. This basically indicates that whilst online marketing is largely encouraged in the current supposed information society, other physical methods of marketing should not be overlooked. These include newspaper advertisement, banners, physical market visits etc.

### **Recommendations**

The Faculty of Communication and Information Science in the target university is strongly recommended to review the infopreneurship course to include content on business skills; business funding opportunities; budgeting; "How to start infopreneurship businesses"; and to blend in other relevant courses to improve the infopreneurial and business acumen of graduating students. These are summarised in Table 6 below.

**Table 6. Suggested Recommendations to Information Science Course Curricula**

Name of Course	Suggested additions to the current curricula (as of 2013)
Infopreneurship	How to start infopreneurial businesses
Entrepreneurship	We suggest merging this course with the infopreneurship course for information science students to allow focus to be placed much on the information business rather than generic issues to do with other unrelated products.
Marketing of Records and Archives Products and Services	This course should be merged with the Marketing of Library Services Course to a Course: <i>Marketing of Information Products and Services</i> . However, possible addition of new information products marketing and management can be done to each course to allow for specificity within each discipline i.e. Publishing, LIS, RAM and JMS
Marketing of Library Services	This course should be merged with the Marketing of Records and Archives Products and Services Course to a Course: <i>Marketing of Information Products and Services</i> . However, possible addition of new information products marketing and management can be done to each course to allow for specificity within each discipline, i.e. Publishing, LIS, RAM and JMS
Design and Realisation of Internet Tools in Libraries and Archives	This course should be merged with the Web Design and Content Management Course to relate web design to the management of web content, its marketing and how web businesses can be set up using Visa Card accounts
Web Design and Content Management (words in brackets may be added to the course)	Web-site hosting; Design of Websites using XML and XHTML (currently only HTML is taught)
*Start Your Business	Business planning & proposal writing; budgeting; funding options; legal registration & intellectual property issues
* This could be added as a new course	

### Conclusion

The major finding of this study is that students are increasingly undertaking initiatives to establish internet-based information businesses but lack further business and technical skills necessary to translate these initiatives into 'real' businesses. Furthermore, these business and technical skills are lacking in the course contents. The researchers recommend a series of adaptations that can be introduced to the courses to improve infopreneurial behaviour among graduating students in information science.

### References

- Chandler, S. 2006. *From entrepreneur to infopreneur: make money with books, e-books and information products*. London: Wiley.
- Coulson-Thomas, C. 2000a. Developing and supporting information entrepreneurs. *Industrial Training* 32 (6): 196-200.
- Coulson-Thomas, C. 2000b. *The information entrepreneur*. Winnerish 3Com Active Business Unit: Hemel Hempstead.
- Coulson-Thomas, C. 2001. Developing and supporting information entrepreneurs. *Career Development International* 6(4):231-235. <http://www.emeraldinsight.com/journals.htm?articleid=883269>. (Accessed 20 October 2011).
- Coulson-Thomas, C. 2001b. Shaping things to come: strategies for creating alternative enterprises. *Industrial and Commercial Training*, 33(5):154-156. <http://www.emerald-library.com/ft>. (Accessed 20 October 2011).
- Dick, A. 2002. *The philosophy, politics and economics of information*. Pretoria: UNISA.
- du Toit, A. 2000. Teaching infopreneurship: students' perspectives. *ASLIB Proceedings*, 52 (2): 83-90.
- Garnsworthy, R. 2009. *Business appraisal and infopreneurship*. Sheffield Hallam University: Faculty of ACES, Sheffield Hallam University.
- Government of Zimbabwe. 2004. *Copyrights and Neighbouring Rights Act [Chapter 26:05]*, Harare: Government Printer.
- Infopreneur FAQ*. 2011. <http://www.how-to-sell-information-online.com/infopreneur-tips-2.html> (Accessed 20 October 2011).
- Kefela, G. T. 2010. Knowledge-based economy and society has become a vital commodity to countries. *International NGO Journal* 5 (7): 160-166. <http://www.academicjournals.org/ingo/pdf/pdf2010/aug/Kefela.pdf> (Accessed 20 October 2011).
- Ngulube, P. 2011. *Infopreneurship*. NUST: Department of Records and Archives Management.
- Rethinking Information Careers*, 2011. <http://lisjobs.com/rethinking-/?p=19=1> (Accessed 20 October 2011).

- Shane, S. 2003. Entrepreneurial motivation. *Human Resource Management Review* 13: 257–279.  
[www.socscinet.com/bam/humres](http://www.socscinet.com/bam/humres) (Accessed 20 October 2011).
- Shapiro, C. and Varian, H. R., 1999. *Information rules: a strategic guide to the network economy*. Harvard: Harvard Business School Press.
- Stiglitz, J. E. 2010. Modern economic theory and development. *The economy quarterly* 7(7): 456-462.
- Weitzen, H. S. 1998. *Infopreneurs: turning data into dollars*. New York: John Wiley and Sons.