

Knowledge Society and the flat World of Thomas L. Friedman

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The traditional society became lately the knowledge society. As the name states, knowledge is the most important asset of our times. There are different opinions on knowledge society and on globalization, but we will deal in this paper with Thomas Friedman's flat world. The world got smaller with the developments in information and communication technology. Globalization has three periods and ten flatteners widely described by Friedman in his book. Technology changes the way we communicate, collaborate and share our knowledge.

Keywords: *knowledge society, information technology, globalization, flattener.*

Introduction

"The World is Flat" is a new vision on information and communication technology's capabilities from the information and knowledge dissemination point of view. The first edition appeared in 2005 edited by Farrar, Straus and Giroux, followed by two others the next years. Even though there are lots of writings about the information technology, Thomas L. Friedman brings something different with the writing style and the examples given at all the subjects treated in his book. Beside the computer science parts the author contributes with his personal experience on globalization. He focuses on this subject and relies on economics, computer science, social life. We will try next to bring forward some information on knowledge society and we will focus especially on Friedman's globalization and the flatteners.

Knowledge society

It would be a very big mistake to confound the term information with that of knowledge. Knowledge¹ is related to people and cannot be reduced to a set of "0" and "1", the way information is represented. It has an "institutionalized" dimension: it is recognized by a community and is related to other knowledge, uses and certain applications. In the information society, it plays a main role. Even though it does not have the same characteristics in the terms of processing and dissemina-

tion, it is above them, it becomes economic asset. This asset led to knowledge society.

Yi-chen Lan mentions Peter Druker which saw the transformations that took place in society. The later said that the main resource in a society is knowledge. The industries made the transition from goods producing and dissemination to information and knowledge. Knowledge becomes an important resource and instrument of innovation that gives its owner competitive advantages. As Yi-chen Lan states, *knowledge* is a set of rules, laws and systems that communicate through manipulation and information processing. Bryan Bergeron² defines knowledge as „information that is organized, synthesized, or summarized to enhance comprehension, awareness, or understanding. That is, knowledge is a combination of metadata and an awareness of the context in which the metadata can be applied successfully”.

Joel Mokyr³ states that knowledge is actually what the person thinks that it is true. In our opinion knowledge is information processed by our brain and used as know-how for different purposes.

Knowledge society's origins (or knowledge

² Bergeron, B., *Essentials of Knowledge Management*, John Wiley & Sons, U.S.A., 2003, p. 10

³ Mokyr, J., *The Knowledge Society: Theoretical and Historical Underpinnings* from *The Gifts of Athena: Historical Origins of the Knowledge Economy*, Princeton University Press, 2002

¹ Weert, T., *Education and Knowledge Society*, Kluwer Academic Publisher, Geneva, 2004, p. 28

based society)⁴ can be traced in papers written around 1960 by Fritz Machlup and Peter Druker. First proposed the term of knowledge industries (1962), the second knowledge work and knowledge worker (1969). The skepticism for the knowledge society concept has at its base the idea that the human society has always been based on knowledge and the new brought in contemporary society of today refers only to the electronic communication and information processing support. A differentiation between information society and knowledge society must be made. While information society is in technologies developments and strategies for their implementation, *knowledge society*⁵ is a society that creates, shares and uses knowledge for people's prosperity and welfare. The main factor for knowledge society's development is innovation market demand and lifelong learning, which require continuous improvement working conditions, productivity and efficiency. Knowledge society uses problem solving instruments. We can mention here high speed computers, networks, information acquisition and so on. Development of this society requires continuous knowledge discovery, assimilation and organization. Knowledge society⁶ implies a new economy, in which innovation process (assimilation and new knowledge conversion for creating new goods and services) is the core. It has a global character and therefore has a main part in globalization process. Information revolution and era, in which we are, are defined by economical, social and political globalization. While the "globalization" term is widely spread and used, there are different definitions and understandings of this phenomenon. Because it has different

meanings for each individual according to his activity domain globalization has many definitions. In one way will be defined by the sociology and in another by the economist. But, we can explain it in general, without referring to a certain field. Therefore, globalization is defined as global integration of economical, political, religious and social systems. Globalization is also about the disappearance of the borders for knowledge dissemination. This is why knowledge society becomes global, thanks to the information and communication technology.

"The global playground is flattening" said Thomas L. Friedman. After a laborious documentation and interviews with the most important people of today, he has published "The World is Flat", a daring history of the 21st century. Declared one of the best opinion leaders of The United States, he deciphers the secrets and lights up the mechanisms of technology, business and politics of this new world. When we take a look at the title of the book our mind goes back into history and not in the present. But for saying this, Friedman has his arguments in the field of technology. The developments that took place in the last decades, interconnect the world, and involve us in the globalization process. Friedman's flattening is at the level of information and knowledge sharing.

The World is Flat

After Thomas L. Friedman, the author of the book „The World is Flat” globalization has three eras:

1. *Globalization 1.0.* began with the discovery of the new world in 1492 by Columbus and lasted until around 1800. The author states that this era made the world smaller. The flatteners were the world's states that tried to influence and dominate the world. This era was sustained by the use of natural resources such as wind and horse power.

2. *Globalization 2.0.* between 1800 and 2000, period in which the world got smaller. It was the birth of multinational companies that became global in search of new markets, work force and natural resources. This era has been influenced by steam motors, railway, auto-

⁴ Filip, G.F., Dragomirescu, H., in Roșca, I.G., Knowledge Society, *Economy Publisher*, Bucharest, 2006, pp. 18,19

⁵ Digital Strategy, *Glossary of Key Terms*, http://www.digitalstrategy.govt.nz/templates/Page___60.aspx

⁶ Drăgănescu, M., *Information and Knowledge Society. Vectors in knowledge Society* in Filip, F.G. (coordinator), *Information Society. Knowledge Society*, Expert Publisher, Bucharest, 2001, p. 45

mobile, telephone, computer, telecommunication, interconnecting the whole world.

3. *Globalization 3.0.* began with the 21st century. It's a new era, the world became very small. While the first two globalization waves were influenced by the countries and multinational companies, the present wave is led by the individuals that globalize. The dominant factor is software and the Internet. These tools, allow individuals, ordinary people, to connect directly amongst them and share information and knowledge between them, in communities too, just by one mouse click.

The new wave of globalization coincides with the transformation of world's economy into knowledge economy or knowledge based economy. In comparison with the old economy, with activities for resource processing, knowledge economy processes technology and information. For some technological fields, it took place a real knowledge explosion. Modern technology (the present one) motivates the individual more than before. If he wants, he can access very easy and fast information, knowledge. He can communicate with others in just a few seconds thanks to instant messaging. But the individual has to know how to use the technology and most important to have one. Otherwise he will be behind; the winners will be those who know to use the technology around them. Friedman considers that the real information revolution is the third globalization.

From Friedman's point of view, the world's flattening means connecting the knowledge centers of the planet in one giant network, which could lead to an amazing era of prosperity and innovation⁷.

The idea of the "flat world" came to him in one of his journeys to India, where, visiting one of the information technology companies (Infosys Technologies Limited) and talking to its CEO, the later said that thanks to technology and especially videoconference the

world becomes flat for him. He can have meetings with his partners, clients, suppliers in real time without being at the same place.

In one of his interviews, which can be watched online on New York Times site⁸, newspaper for which Friedman is writing, he states that the main technologies that led to globalization are the personal computer, Internet and software revolution. The flattening of the world is taking place because of the platform created by people, for people, for education, communication, interconnecting, in few words, a real technological revolution.

The technology connecting platform allows people to communicate, collaborate, and especially innovate. Therefore, they have the ability of knowledge sharing, acquisition and use for any type of activity. The flattening of the world, as Friedman states, took longer than world's creation by God in six days, 10 "major political events, innovations, and companies" contributed to this process. Same time with the beginning of the flattening, we entered in a new stage of human's history; we are witnesses of the digitisation, virtualisation and automation of almost everything related to the human life. Next, we are going to mention all the ten flatteners as Friedman named the factors of influence that led to the world's flattening.

Flattener #1. 11/9/89 When the Walls Came Down and the Windows Went Up. Friedman remembers here the fall of the Berlin's wall, same time with the appearance of the IBM's personal computers that took over the market. Windows gave them life, improving horizontal communication instead of the vertical one on which the communism was based. These technological appearances led to improved information collection. Meanwhile, because of the people's desire to communicate on long distances, the phone network is developing. The author makes a short history of the technologies of that time. The first IBM PC got on the market in 1981. Science people start to use Internet and e-mail with

⁷ Friedman, T.L., *The World is Flat: A Brief History of the Twenty-first Century*, Farrar, Straus and Giroux, p. 8

⁸ *What is the Flat World?*

http://video.on.nytimes.com/index.jsp?fr_story=059db33970c4329ad6493a08d005052ef5607769

the desire to share information. The first system operation version appeared in 1985, but only in 1990 becomes user friendly. The global information revolution was propelled by the apparition of dial-up modem that allowed computers to connect to the Internet. At that time, the networks were based on file sharing and electronic messages.

Flattener #2. 8/9/95 When Netscape Went Public. In the middle of the 1990, arose the need to go further, to evolve to a new stage in the information revolution. A passing took place, from platforms based on computer to those based on Internet. The applications that led to this new stage were the e-mail and especially the browsing. The actual concept of WWW (World Wide Web) was brought by Tim Berners Lee in 1991, who built the first Internet site to offer information. The first public browser has been created by Netscape and has been made public on 9th of August 1995, changing the world. Netscape was the first public browser widely spread. Optic fiber invention brought to information portability in the digital format. Communication protocols appeared, available for everybody, no matter the computer (FTP, HTTP, SSL, SMTP, POP, TCP/IP). Together they form a data transport system on the Internet, no matter the computer, mobile device or PDA, each protocol with its own role. Photos and books are beginning to be digitized for the need of information and knowledge sharing.

Flattener #3. Work Flow Software. Let's Do Lunch: Have Your Application Talk to My Application. Friedman states about applications connection and the transmission protocols needed to accomplish this. The work flow must be automatized for access facilitation, faster processing and dissemination of information. This stage appears from the need to shape things, to create, to sell, to buy, to do the inventory, to pay taxes from far away. The flattening was made through the access of one computer to other's resources. The technical base for software-software interaction was the descriptive language XML (EXtended Markup Language) and its protocol (SOAP – Simple Object Access Protocol), which became the foundation of the

Web based workflow. These developments allowed electronic data interchange, such as music, photos, movies and so on, between different applications for their creation, modification, storage, publishing and transport no matter the physical location of people and their computers. We agree with Friedman's opinion but we would add that applications connection can be done directly among them, if they allow it, and through other applications if they cannot connect directly, and most important with the use of Internet. Let us not forget that the rivalry between Microsoft and other software developing companies does not allow application to connect unless the user has lots of knowledge and does modifications in order to succeed. We must take in consideration how the connection is done, with or without the Internet.

Flattener #4. Open-Sourcing. Self-Organizing Collaborative Communities. Because of the flat world platform, many individuals are able to post their own ideas and opinions, without even read a newspaper. News travel very fast from one place to another because of the technology we have today. Displaying opinions on a site is known as blogging. One of the most revolutionary forms of collaboration in the flat world is uploading. The user becomes from consumer a producer. The author mentions two forms of community developed software and those are: open-source – software created by a company or person offered for free for the users with the condition that in case of code alteration the transformations brought must be made public so that anyone can take advantage of them; free software – software developed by somebody and shared without any pay for the user. The main objective is to write, modify, improve, deliver free software so that the entire world becomes stronger and free from the domination of global corporations. The best example, well known, is the birth of the Linux operating system from the desire to escape the Microsoft domination on software market.

Flattener #5. Outsourcing. Y2K. Friedman evokes a service outsourcing to underline the fact that, costs for producing goods can be

decreased if the right solution is looked up, so that is how companies came with the idea of factory openings in countries with cheaper workforce. He mentions the computer's problem in the passing between the years 1999 and 2000 when computers were recognizing the year 2000 as 1900 because the year had only two digits. This problem, known as Y2K, has been solved with the collaboration of the USA with India. It's a good example for collaboration between two countries set apart by a large geographical distance. The Americans thought that it was cheaper to go to Indian specialists than for the Indians to go to America. The first earn was the difference in salary. They paid in India the salary at the level of its economy, instead of paying them in American salaries on the territory of the United States. Through outsourcing, any service or knowledge, that can be digitalized, can be transmitted at a global level to the most cheapest, intelligent and efficient supplier.

Flattener #6. Offshoring. Running with Gazelles, Eating with Lions. Big companies tend to get their business where the workforce is cheaper and there are plenty and also cheaper natural resources. The example given here by Friedman is that of China. It is well known that this country has a great marketplace all over the world. China's economy has direct connection to that of the developed world; a separation would provoke a global economic collapse. We know that in China the workforce is cheaper than in other parts of the world because of the great number of people and this way the offer is bigger than the workforce demand.

Flattener #7. Supply-Chaining. Eating Sushi in Arkansas. When the world is flat, the companies must take advantage of the best suppliers with the best prices, wherever they can be found. The big problem for the supply chains is that they are hard to manage, that is why there must be continuous improvement and innovations. Real time collaboration is the most important feature of Internet based supply network administration. Supply

chains⁹ are the global distribution systems that facilitate how products get from the creator – the designer, inventor, or developer – to the producer, the distributor, and finally the consumer. The omnipresent and always accessible Internet, allows users, no matter the geographical positioning, to collaborate at the same project in real time, to speed up the project's development and to improve the use of resources, because Supply Chain Management¹⁰ is manufacturing, storage, transport coordination between the partners in a supply chain in order to obtain the best combination between the response and the efficiency of the market.

Flattener #8. Insourcing. What the Guys in Funny Brown Shorts Are Really Doing. These words are quite interesting associated with the logistics company UPS. Friedman discovered that this company doesn't deal only with the transport of packages from one place to another but does other activities too. It infiltrates customer's business, helps them, takes their clients but in a good way. They found out that it is better for the customers to take some of the services of others companies, like an intermediary. Both the clients and the companies have more gains than before. The clients get their products faster and the supplier wins customers' trust and gain money by eliminating transport costs. Everybody has something to win in this business. The problem is that Friedman does not mention the fact that insourcing is exactly the opposite of outsourcing so it means that a company is getting back the services that had been outsourced. Taking some activities from companies can be considered globalization if those activities are done in other countries, or we can see here the globalization as Friedman does, from the knowledge dissemination point of view.

Flattener #9. In-forming. Google, Yahoo!,

⁹ Canton, J., *The Extreme Future. The Top Trends That Will Reshape the World in the Next 20 Years*, Plume Publisher, 2006, p. 79

¹⁰ Hugos, M. - *Essentials of Supply Chain Management*, John Wiley & Sons, USA, 2003, pp. 5, 6

MSN Web Search. The search engines' main objective is to display the most relevant results related with the key terms searched, from different sources from the sites all over the Internet. In-forming is an individual's analogous to uploading, outsourcing, insourcing, supply chains and offshoring. In-forming is the capacity to build and position your own supply chain – information, knowledge, entertainment. In-forming is actually being in a permanent search of knowledge. Because of the existence of search engines, the users can find and access information and knowledge from all over the world in any domain, no matter the place and time, all they need is just a connection to the Internet. The only condition to finding information is that somebody to upload them. We totally agree with Friedman on this point, but we must not forget that the Internet's sites are full of information from individuals to companies and universities. It is true that we can find but we must take in consideration the source, we have to look very careful because not everything on the Web is reliable or true. Companies are trying to protect their information and files that is why important ones need a registration for accessing or at the most strict they can be accessed only from the inside. This depends on the security policies applied by that company. But we have to be thankful for what we can find on the Internet, without it, it would be very difficult to keep up with everything that happens in the world.

Flattener #10. The Steroids. Digital, Mobile, Personal, and Virtual. Friedman states that this flattener is a group which called it the steroids, those technologies that amplify and overload the other flatteners. They take all forms of collaboration – outsourcing, offshoring, uploading, supply chain, insourcing and in-forming and add to them the possibility of being digital, mobile, personal and virtual. Any information can become digital, can be managed, shaped and disseminated on other computers, through the Internet, satellites, optic fiber. Virtual – the process of design, manipulation and digital content transmission can be made at high speeds, very

easy. Thanks to the wireless technologies, everything can be accessed anywhere, anytime; anybody can connect to computers and to anybody means they can be mobile. By saying that everything can be made by us, for us, with the help of our own computers, Friedman means that the user is very involved in everything related to technology. Friedman's steroids are:

- personal computers and their components;
- innovations in instant messaging and file sharing;
- innovations in online callings;
- videoconference;
- progress in computer graphics;
- new technologies and wireless devices that confer mobility.

Because of the steroids, computers can communicate among them, people can communicate to each other and to other computers at great distances, faster, easier and cheaper. "The World is Flat" addresses economists and computer scientists, but not only to them. For the first category it brings forward the problem of globalization not only from the technological point of view but also economical. It brings forward the globalization of great companies and mainly the American ones. We can see all over the book that Friedman's job and especially the journeys are very important to him. The book allows us to enter a different world, one viewed through the glasses of a political affairs journalist. That is why it is very hard to place the book just to one domain. The flatteners are accompanied by rules of flattening, from this we can draw the conclusion that we cannot be indifferent to what is happening and we can not run from the globalization wave or better said the technological wave that is started to affect us a long time ago.

Zakaria¹¹, a journalist for The New York Times, says that the forces cannot be stopped

¹¹ Zakaria, F., *Book Review: 'The World is Flat': The Wealth of Yet More Nations*, The New York Times, May 2005, http://www.nytimes.com/2005/05/01/books/review/01ZAKARIA.html?_r=1&oref=slogin#

or slowed down except with a very high cost and with negative influences on welfare. Countries that have opened to the world, accepting new ideas, have prospered, comparing to others that remained traditional. Friedman improves the living standard of some countries, among them India, that seems like a country with much technology and rich for those that don't know much about it, in contrast to the reality. In exchange, United States of America seems to be the greatest nation, dominating the world in almost every field, especially in politics and economy. We cannot blame him for being born in a country where everybody thinks is better than others. Even though Friedman states in his interviews that his globalization is from the information and communication technology point of view, it is obvious that he's not limiting to that. He goes to politics and economy and some blame him for dealing with international economy even if it's not his main domain and doesn't have too many knowledge.

A major problem in this book is that Friedman talks about people with few abilities and less educated, but he is referring to them as a small group. But let us not forget that in every country there are lots of people that do not have the ability to work on a computer, if they do not have access to one, therefore their access to knowledge is more limited than to the others that use information technology and mainly the Internet. We let this problem to those who are preoccupied about educational issues using technology. But Friedman encourages very much knowledge assimilation for facing a competitive environment and in continuous expansion. At one point he even states that everybody will get the job in accordance to their knowledge. To contradict him, we can remember about James Canton, the author of an interesting book about the future called "The Extreme Future" in which, according to some studies, he states that there will be a point in future when jobs will be exceeding the demand for workplaces, because it can appear the phenomena of knowledge loss. Friedman is aware that people participate in globalization

because of different reasons, among them subjective ones and/or objective but especially cultural. Cultures opened to globalization (he means here foreign ideas), and especially to capitalism and mass consume, will prosper, will get rich, while the ones that don't, will fail.

Even though a bestseller, "The World is Flat" has been criticized by many. Richard Adams, journalist at The Guardian¹² newspaper states that Friedman is making hidden publicity to some products and companies and this is notable because of his subjective writing stile. We agree to some point with Adams, but we must remember that most of the books that have case studies or examples, mention companies and products, so we cannot blame Friedman for that. He is being criticized for mentioning some well known facts such as the industrialization of China. Adams is the one that states that Friedman tried to write a book about globalization on economical issues, but he is no expert in that.

Friedman mentions that wealth and power will rise for those countries, individuals, universities and group which have three basic qualities: the infrastructure for connecting to the flat world's platform, education to determine more and more people to innovate and to explore the platform, and finally, the power to choose the best from it and to reduce the side effects. The world changes from a vertical value creating system – of command and control – to a rather horizontal one – of connection and collaboration – and meanwhile destroying walls, barriers, the societies will confront with various and many changes that take place the same time.

Knowledge is important for everybody and Friedman is aware of that, and underlines that individual and group knowledge makes the countries move to globalization, the individual is the one that globalizes. Globalization with information and communication technologies, by flatteners' convergence

¹² Adams, R., *Once upon a time in America*, The Guardian, May 2005, <http://books.guardian.co.uk/reviews/politicsphilosophyandsociety/0,6121,1488753,00.html>

which form a Web based global platform, allows individuals, groups, companies, universities collaboration from all over the world. The writer mentions that not everybody has access to the global platform and that we will not become equals and that a growing number of people will gain or at least they will try to access the platform through various technologies, for collaboration, communication, competition, and destruction sometimes. The changes that affect or will affect the knowledge society take time, they will not have effect over night.

Conclusions

Friedman's "The World is Flat" is a unique point of view on globalization. Because of the subjectivity and easiness to read, the reader is attracted by the book's content. It keeps the curiosity alive. There are opinions that this is an "idiot's guide" in computer science, but actually it is a very appreciated, and it is a guide of information and communication technology in context of globalization, political affairs and economy. A new vision on how the world is moving. Not only has he praised The United States but the less developed countries which the author calls non-flattening. He is aware of the negative consequences of the flattening, such as terrorism and national identity loose.

James Canton in his book called "The Extreme Future" has a remarkable opinion on globalization that we would like to quote: "globalization is about a new synthesis of ideas, trade, communications, and collaboration that should promote future global prosperity, freedom, and opportunity". If we analyze this statement we can see that Friedman respects everything that globalization implies, from new ways of trades using technology to freedom in using them at their best. Friedman encourages people to assimilate more knowledge. The individual is now the main actor in globalization, but this way he influences the society and especially the knowledge based society. It is a new type of society that requires all forms of knowledge, including artistic and literary. This way the

field for truth society, morality and spirit will be prepared. In the end, any human being can do whatever he wants with his knowledge, life, politics, and economy and so on. We will leave the choice of choosing what to remember from this book to the reader. In fact, every reader has his own opinion about globalization and factors that influence it. Good or bad, everyone is allowed to bring critics. Even though technology is the biggest flattener for Friedman's globalization we consider that the world is still round.

Bibliography

1. Adams, R., *Once upon a time in America*, The Guardian, May 2005, <http://books.guardian.co.uk/reviews/politicsphilosophyandsociety/0,6121,1488753,00.html>
2. Bergeron, B., *Essentials of Knowledge Management*, John Wiley & Sons, U.S.A., 2003
3. Canton, J., *The Extreme Future. The Top Trends That Will reshape the World in the Next 20 Years*, Plume Publisher, 2006
4. Digital Strategy, *Glossary of Key Terms*, http://www.digitalstrategy.govt.nz/templates/Page_60.aspx
5. Drăgănescu, M., *Information and Knowledge Society. Vectors in knowledge Society* in Filip, F.G. (coordinator), *Information Society. Knowledge Society*, Expert Publisher, Bucharest, 2001
6. Filip, G.F., Dragomirescu, H., in Roșca, I.G., *Knowledge Society, Economy Publisher*, Bucharest, 2006
7. Friedman, T.L., *The World is Flat: A Brief History of the Twenty-first Century*, Farrar, Straus and Giroux, 2005, USA
8. Hugos, M. - *Essentials of Supply Chain Management*, John Wiley & Sons, USA, 2003
9. Lan, Yi-chen, *Global information Society*, Idea Group Publishing, U.S.A., 2005
10. Mokyr, J., *The Knowledge Society: Theoretical and Historical Underpinnings* from *The Gifts of Athena: Historical Origins of the Knowledge Economy*, Princeton University Press, 2002
11. Weert, T., *Education and Knowledge Society*, Kluwer Academic Publisher, Geneva, 2004
12. Zakaria, F., *Book Review: 'The World is Flat': The Wealth of Yet More Nations*, The New York Times, May 2005, http://www.nytimes.com/2005/05/01/books/reviw/01ZAKARIA.html?_r=1&oref=slogin#