BUSINESS AND ENTREPRENEURSHIP. MUTATIONS AND STRUCTURAL CHANGES DUE TO THE TRANSITION TO KNOWLEDGE ECONOMY

Oana-Georgiana CIOBANU
"Ştefan cel Mare" University of Suceava
13 Universitatii Street, 720229 Suceava, RO
oana.ciobanu91@yahoo.com

Daniela NEAMŢU
"Ştefan cel Mare" University of Suceava
13 Universitatii Street, 720229 Suceava, RO
dananeamtu999@gmail.com

Abstract. *A booming subject in the current socio-economic context is the "knowledge" issue. Along with the evolution of the society and of the knowledge economy, the business environment and the organizations also underwent structural changes. The 1960s, 1970s and even 1980s was characterized by major economic changes. It was the period Schumpeter called as a period of "creative destruction" in which the new technologies have gained ground, replacing industrial bases. This scientific approach is complementary to other work in the economic field and aims at a multidisciplinary approach in order to travel the trajectory of society, but especially of the economy, of the business environment and of the company with all its specific sub-assemblies, in the context of change and conversion from the informational specific to the one based on knowledge, dominated by the new technologies and innovations, in particular pursuing the industrial revolution trajectory from Industry 1.0 to Industry 4.0. The present paper aims to make a temporal incursion and a dynamic analysis of the stages that have been made in the last years in the literature regarding the subject proposed for research. In this context, the temporal incursions of the business environment in the global context are presented, from the First Industrial Revolution to the present, when we are faced with the Fourth Industrial Revolution, along with the changes brought by these transformations in the form of entrepreneurship, organization, and resources, as well as the changes that the local and the global administrative bodies should adopt in order to keep up with societal changes.*

Keywords: *entrepreneurship; knowledge; business environment; knowledge economy; the new technologies.*

Introduction

More and more common in literature and in scientific circles there are concepts that derive from the „knowledge economy", such as the „knowledge society", the „enterprise of knowledge". Syntaxes such as the "information society", "intelligent enterprise" etc. also join them. If, three or four decades ago, these terms were used only by researchers, analysts, or found in academic writings, and seemed to be visionary and bold aspects, now their transformations and applicability in practice

began to materialize by capturing an outline and enveloping normality. The natural question came to meet the contextual changes, namely whether the need to create a "knowledge society" in particular is reasonable, given that history and anthropology have taught us that since ancient times, all societies were perhaps each in their own way, knowledge-based societies?

The current spread of new technologies and the emergence of the internet as a public network seem to be a chisel that carries new opportunities to broaden this forum to the public. Could now be the time to have the means to achieve equal and universal access to knowledge and equidistant sharing? This should be the cornerstone of genuine knowledge-based societies that are a sustainable source of human development. Currently, as a result of the in-depth integration of national economies following the globalization process, fueled more and more by the engine generated by the ever-increasing revolutionary advances in information technology (IT) breakthroughs, the demand for information, the provision of knowledge following their processing, and their increasingly diverse application areas have become a necessity and have led to major changes in terms of challenges as well as opportunities for both emerging and developed countries. In order to keep up with the transformations induced by the new trend and to effectively create and sustain a knowledge economy, the countries, the companies around the world and the society all need to become competitive at the level of knowledge (Shibata, 2006).

Fundamental concepts related to entrepreneurship and business

The development and dynamics of any society, economy, or organization require actors at a micro level - individuals - who have the ability and persistence of making the change. Institutions, as well as market and organizational structures, do not create a change in the absence of human actors. It is about unique knowledge, perceptions and the goals of the human beings that are endowed with the ability to take action accordingly, which initiates novelty. For such entrepreneurial initiatives to have a lasting impact, they need to be value-creating. The question is in this case, how should these people, who undertake entrepreneurial activities, be characterized, and how should these entrepreneurial activities be defined?

Richard Cantillon was the first economist to use the term "entrepreneur" in his paper called *Essai sur Nature de Commerce en Général* (1755/1999). In his conception, the entrepreneur had three meanings: the capitalist landowner, the entrepreneur he called the referee and the paid manager (Tanţău, 2011).

A bold approach to entrepreneurship is met at Kent et al. (1982) in the Encyclopedia of Entrepreneurship: "The launch of new products and technologies that better meet the consumer's demands and increase productivity has been the most prominent force in the entire long and thorny history of man's ascension from underdevelopment to prosperity "(Vaduva, 2004). This definition brings entrepreneurship to one of the most important positions of society, from which one can easily observe the scale and contribution it has in the development of a region or community.

Theoretical definitions of entrepreneurs include a wide and varied range of nuances. For example, Wennekers and Thurik (1999) mention 13 different definitions, while

Glancey and McQuaig (2000) limit their enumeration to five. Most contemporary entrepreneurial theories are based on the contributions initiated either by Schumpeter (1911), Knight (1921) or Kirzner (1973).

Joseph Schumpeter emphasizes the role of innovation in addressing the entrepreneurial activity. His analysis puts the economy in the context of a temporary general equilibrium and focuses on the market as a dynamic process driven by "creative destruction". In his vision, the entrepreneur determines the emergence of some industries, leading to major structural changes in the economy. Indeed, Kirzner treats the role of innovation in entrepreneurship by insisting on its "coordinating" rather than "destructive" character, that is, innovative as it appears in Schumpeter.

"The entrepreneur represents any new or already existing entity that offers a new product or service or develops and applies new methods in order to produce and distribute the already existing goods and services at a lower price" (William, Baumol, Litan & Schramm, 2009).

French economist Jean Baptiste Say said of entrepreneurship that "it refers to a manifesto and a proclamation of disagreement: the entrepreneur overturns and disorganizes."

All economists who wrote about entrepreneurship, however, agreed that the core of entrepreneurial activity is judgment, reason, and therefore awareness of actions to be taken (Casson, 2000). Entrepreneurs should develop new ways of thinking and an adequate understanding of knowledge and intellectual capital (Bratianu, 2007; Bratianu, 2009; Bratianu, 2010).

The current context of the entrepreneur in relation to the knowledge era and new technologies

That knowledge plays an important role in the economy is not a new idea or finding. Technologies have always been underpinned by knowledge, but an economy run on knowledge is characterized by a critical role for information and communication technology (ICT), a high proportion of knowledge-intensive activity and intangible capital that amounts to more than tangible capital in the economy's capital stock (Atkinson & Court, 1998; Foray, 2004). Wealth creation increasingly depends on the generation and exploitation of knowledge involving not only science and technology but also knowledge of practice required to create economic value (Gibbons et al., 1994).

Today, we witness together to a new revolution, that this time completely destabilizes and restructures everything that was known about the entrepreneur, the business environment, and entrepreneurship. The Internet era has progressed amazingly and passed itself through some evolutionary stages, its own "Toffler" waves. The first Wave of the Internet focused on the establishment of the infrastructure and foundation of the online world. The second wave of the Internet occurred at the beginning of the 21st century in time for hyper-utilization of the window "dot com" up to closing - the first important event of eradication from the Internet age. Many entrepreneurs and investors have lost fortunes. But those who resisted were given a lesson regarding how

to lead the new round of innovation on the Internet. The second wave included building based on the internet. The third wave is when the Internet ceases to belong to Internet service companies. It's when products need the internet, even if it does not define them. Entrepreneurs of this era will question the largest industries in the world and those that most affect our daily lives. They will restructure the health system and re-enter the education system, create products and services to ensure that food is healthier and that transport is done in a simpler way. But as this new generation of entrepreneurs succeeds, the methods used so far are not enough, but continuous development and systematization based on the consolidation brought about by the knowledge era are needed (Case, 2017).

The New Technologies and the Fourth Industrial Revolution (4.0 Industry)

Recent advances in technology, particularly in the communications and information sectors, are revolutionary both for the environment and nature and for the economy. In this way, information and knowledge are spreading quantitatively and becoming accessible. Also, the new technologies tend to use new economic relations in qualitative terms, to the detriment of the quantitative one, which results, from the saving of resources to the individualization and specialization of production and consumption. The chain reaction has the effect of conserving resources and increasing the role of the consumer.

However, we must point out that these changes in technology may be the most important reason for the increasing and strengthening the entrepreneurial opportunities that are more numerous at the end of the 20th century and the beginning of the 21st century. These new technologies have the potential to generate new goods and services and thus create new firms. The new technologies have reduced transaction costs and lowered the threshold of minimum efficiency in many areas. This fact stimulated the SME sector, who had little chance in front of the big corporations so far, but it may be too early to determine whether current technologies will have similar results to those achieved by technologies implemented after the first two industrial revolutions (Văduva, 2004).

The ability of a society to increase wealth and well-being over time directly depends on its potential to develop, exploit and diffuse knowledge, thereby influencing growth. The most pronounced developments in human history have been preceded by nonlinear periods, discontinuities or barriers augmented by knowledge and technical progress. Figure 1 shows the 4 industrial revolutions that have taken place over time.

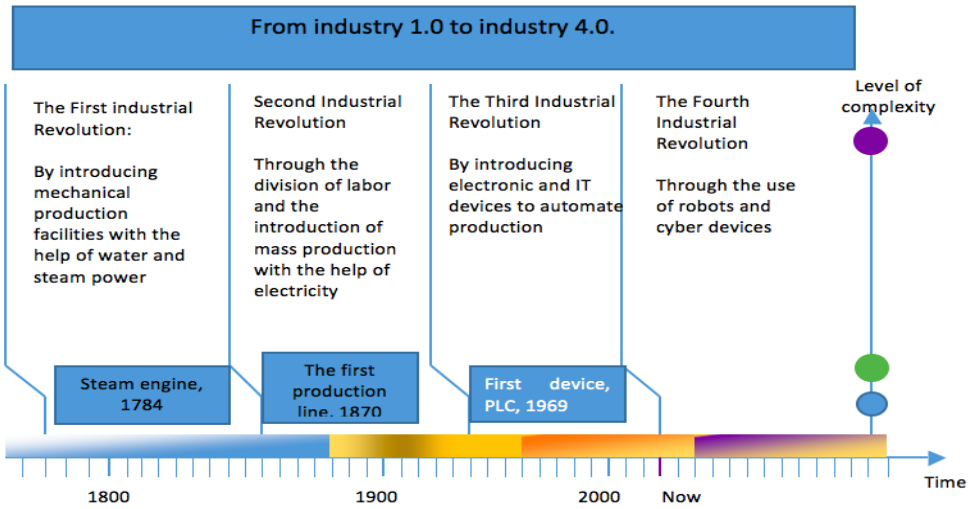

Figure 1. The four industrial revolutions
(adaptation after the German Research Center for Artificial Intelligence – DFKI, 2011)

More than the revolutions that preceded it, the Fourth Industrial Revolution has the potential to raise global income levels and improve the quality of life for the population around the world. So far, those who have benefited most from it have been those consumers that have capital, who can afford access to the digital world; technology has made it possible to create products and services that aim at increasing the efficiency and well-being of our personal lives. From ordering a taxi to booking a flight, purchasing a product, making a payment, and working from anywhere in the world, videoconferencing between foreign business partners, any of these can now be made remotely.

Impact of industry 4.0 on the business environment

A key trend is the development of technology-based platforms that combine both demand and supply in order to change the existing industry structures such as "on demand" savings or exchange savings. These technology platforms, easy to use both on the phone or tablet, combine people, assets, and data, creating new ways of consumption. In addition, they reduce the barriers to creating wealth for businesses and individuals, while changing the personal and professional environment of workers. These new forms of platform-based business are rapidly multiplying into even more new services, adjacent to the base one. In Table 1 we can see a comparison of the business environment characteristics in the context of the industrial era versus the knowledge era.

Table 1. Comparisons and benchmarks of the business environment in the industrial era versus the era of knowledge (Nicolescu & Nicolescu, 2005)

Features of the business environment:	
Industrial Era *	***Knowledge Era*****
Protected markets, monopolies	Globalization, international competition
Focus on the capital in technical-material and financial assets	Focusing on capital represented by human resources and knowledge
Rigorous, hierarchical organizations	Flexible organizations
Savings at national scale, large factories	Flexibility in production, savings on a global
Mass production	Personalization and localization
Creating wealth, with profit being the main motivation	Distributing wealth, corporate responsibility
Routine based environment	Innovation-based environment

*Note: * Based and consolidated on the first three industrial revolutions*
*** In development and consolidation today*

Overall, there are four main effects that the last industrial revolution has on business, namely: changes in customer expectations, development of "accessory products" and services related to the mother business, the promotion of collaborative innovation and changes in the organizational form of an enterprise. Whether it's consumers or producers, customers are becoming more and more in the epicenter of the economy, which is more and more concerned with the way they are served. Both products and services, more than ever, can now be enhanced with the help of digitization, which also increases their value. New technologies make the goods more durable and more resilient, based on the data and analyzes of how they are maintained. A world of customer experience, data-based services, and performance metrics rendered through analysis, also require changes in collaborative forms that take into account the speed at which innovation and creative destruction occur.

Change Factors in the 4.0 Industry

The World Economic Forum International Organization developed and led in 2015 and published in 2016 a study entitled "The Future of Jobs" which sought to understand the impact of current and future key transformations produced at the level of companies and economies in employment levels, skill sets and worker recruitment patterns across industries and countries.

According to the developed study, there are several demographic and socio-economic factors and of a technological nature, which influence these transformations and contribute to the structural changes of the industrial and business domains and can be traced in Figures 2 a, b.

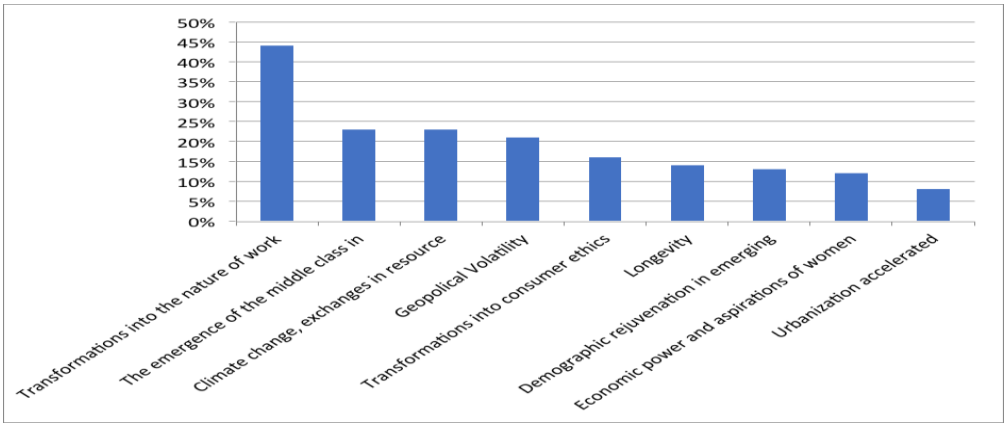

Figure 2a. Factors contributing to the structural changes of the business environment in Industry 4.0 - Demographic and socio-economic (adaptation after the World Economic Forum, The future of Jobs, 2016)

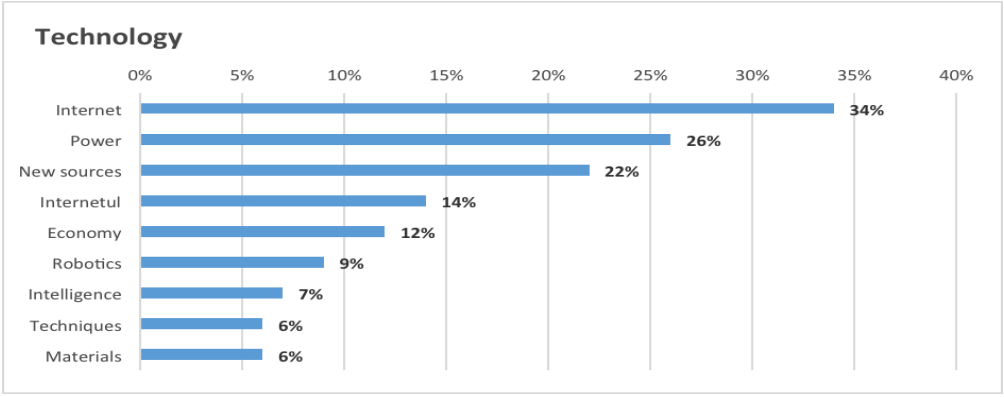

Figure 2b. Factors of change, Technology (adaptation after the World Economic Forum, The future of Jobs, 2016)

The classification is made according to the share resulting from the answers in the study and represents the trends, which the representatives of large companies expect to be created in the next period up to 2020.

With the emergence of the global interconnection platforms, of new business areas, and some business models tailored to the new context, it appears that talent, skills and capabilities, culture and the forms of organization at the level of the business environment, at the level of companies and even at the level of the individual will have to be rethought and restructured. Figure 3 shows the development directions on temporal sections, until 2020, based on the change factors impacting on the knowledge revolution (Industry 4.0) according to the World Economic Forum (WEF, 2016).

In general, the inexorable transition from simple digitization (the third industrial revolution) to technology-based innovation (the fourth industrial revolution) forces companies to rethink the way they do business. However, the fundamentals remain the same: business leaders and executives need to understand the changing environment, to face the assumptions by which their working teams are redefined and constantly and continually rely on innovation.

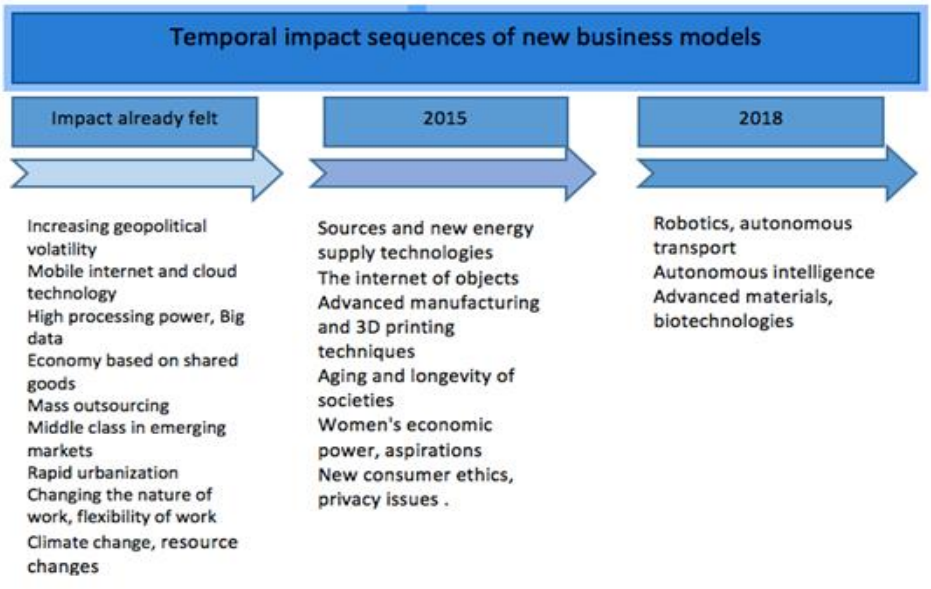

Figure 3. Directions of temporal development of new business models in the knowledge revolution (adaptation after the World Economic Forum, The future of Jobs, 2016)

Variations and reflections of the company in the context of the business environment of knowledge

Technology-based firms have an innovative role in the emerging economy of knowledge, especially at international level. Indeed, the efficient use of technological innovation is considered to be a prerequisite for business survival. It has long been recognized that technology-based entrepreneurship is important for economic growth and it has been noticed that an international focus is needed on businesses that have access to international markets. Against this background, it was realized that business development and assistance programs should allow businesses to take advantage of innovative global technologies (OECD, 2005). Significant opportunities are present for companies through the adoption of new technologies that must remain the awareness of the barriers interfered with by their applying and implementation, and this has led the academic environment to focus on adoption factors (Parasuraman, 2000). In fact, there was a tiny link between the determinants of adopting new business technologies and the expected outcomes such as innovation, except for the sectors based on development research.

Growth and development of businesses through incremental models or the development of new revenue in relation to Industry 4.0

Regarding the growth and development of a business, two of the most important requirements are business operations and business growth. The organizations focused on the first condition can use the technologies brought by the Industry 4.0 primarily to improve productivity and reduce risks, while those focused on growth can apply and implement new technologies in order to build incremental growth or generate new forms of revenue.

Table 4 illustrates the transformation processes required especially for the goods industry but can also be adapted to the service industry. These strategic objectives can be pursued at different stages of the productive chain as well as in combination with each other. Technology-based firms with an over-average absorption capacity tend to present experience, knowledge, and a skill base, in order to create new knowledge and adopt exchange processes (Cohen & Levinthal, 1990; Zahra & George, 2002). An approach, close to technology-based companies, is reflected through the technology transfer policies, innovation diffusion, technology clusters, business incubators from university centers, collaborations and business partnerships with the academic environment, thus creating the technological concept of business.

According to analyzes conducted by the Deloitte consulting company, the changes brought by the Industry 4.0 related to business growth are linked to two components of the productive chain. On the one hand, companies can develop new offers or enhance the breadth of existing ones through research and development (CD) of advanced materials and specialized products. On the other hand, digital technologies allow companies to interact with customer preferences and to personalize their products, expand them with information and services in a way that allows them to charge additional costs and sometimes increase prices, or develop new business models as outlined in Table 5.

Table 4. The structural transformations brought by Industry 4.0 at the business level (adaptation after the Deloitte analysis)

The structural transformations brought about		
The produced impact	**Key objectives**	**Transformations produced**
 **Business operations**	**Improving production** **Risks Reducing**	• Production • Supply chain planning
 **Business Growth**	**Grow** **Generating new revenue**	• Research and Development • Smart products and services

Table 5. Key objectives and Transformations for business growth in the 4.0 Industry (adaptation after the Delloite analysis)

The produced impact	Key objectives and transformations produced for business growth in 4.0 Industry	Necessary transformations and their description
Increasing additional revenue	**Research&Development**	Additional production section for testing new goods and services
		Advanced analysis processes for material selection
		4D printing to create advanced materials
Generating new revenue	**Smart products and services**	Developing smart products and services for explicit domain applications
		Providing data services to increase existing revenue
		Building new revenue models, geared to integrating customers into operations

Turning to the native knowledge resources, analyzing the work of Professor Nicolescu O. in 2005, we can observe in Table 6 some specific characteristics of knowledge-based firms. We note the similarity that parallels previous knowledge studies and current ones, regarding development trends among businesses.

Table 6. Characteristics of knowledge-based company (Nicolescu & Nicolescu, 2005)

No. crt.	Characteristics
1	Restructuring by reducing the size of physical assets, the activities performed, and the number of employees and the development of the internal knowledge base and expanding relationships with partners such as suppliers or external experts.
2	Outsourcing the activities that hinder business productivity and internalization of those who are closely related to the process of developing the essential knowledge for the organization.
3	Reforming external human resources relationships in the sense of collaborating with specialized firms or independent persons for those activities such as organizational maintenance or functional activities.
4	The basis for strategic development will be to expand both in depth and in the broad the knowledge of the organization in order to reach a point where it will able to produce its own knowledge and recognize the opportunities through which this knowledge can be produced.
5	The organizational chart of the company is also restructured from hierarchical to models similar to the cognitive human model, which contains semi-autonomous structures, with an emphasis on experts that make room for organizational and individual resources for lifelong learning structures.
6	Efficiency and effectiveness are given by team structures in which cohesion is enhanced and collaboration is diminished.
7	With the downsizing of hierarchical levels in a company, the need for inferior and intermediate hierarchical managers is also diminishing, and there is a growing need to include "knowledge" managers, who are usually at first-stage collaborators or consultants on the issue of change within the organization.
8	Modeling the company's managerial and economic goals to focus on the value of knowledge.

9	Channeling investments towards the formation and training processes for the external workforce in order to replace one's own staff that does not progress and does not integrate.
10	Restricting investment funds in training peripheral staff does not directly contribute to the transformation of the firm
11	Designing a new incentive model for employees based on their performance and merit for all company personnel, increasing the method of rewarding peripheral staff for individually produced results, the concurrent use of rewarding methods for the performance both globally, in groups, or individually, of promoting staff both internally and externally on a large scale.
12	Developing an open culture, involving both customers and suppliers, to make decision-making more effective.
13	Practicing partnerships and collaborations with other companies to exchange experience and cost efficiencies.
14	Removing barriers between different categories of human resources, between working from home or working in the company
15	Paying a major focus on the acquisition, use, protection, and valorisation of intellectual capital.

In the not too distant future, however, technological innovation will also bring a miracle of supply chains, with long-term gains and with serious implications in terms of efficiency and productivity. Transport and communication costs are shrinking, logistics and global supply chains are becoming more and more effective, and the cost of the trade is diminishing, all of which will open up new markets and stimulate economic growth. At the same time, however, as economists Erik Brynjolfsson and Andrew McAfee have pointed out, the revolution could lead to an even greater inequality, especially through its potential to disrupt labor markets if it is not properly regulated from the outset. Since the form of robotization and automation tends to replace labor throughout the economy, replacing people with cars could exacerbate the gap between capital and unemployment figures. On the other hand, it is also possible that worker substitution by technology results in a net increase in safe and rewarding jobs.

Conclusions

The application of knowledge, manifested in entrepreneurship and innovation, research and development, is one of the main sources of growth in the world economy. It can be said that data is the core of the knowledge society; the information refer to its description, definition or perspective, and answer the questions what, who, when, where; knowledge includes strategies, practices, methods or approaches and answers the question how; and wisdom completes the picture of knowledge and includes principles, judgments, ethics, or archetypes answering the question why.

Now, at the beginning of the fourth industrial revolution, the developments in some previously less-developed areas, such as artificial intelligence and machine programming, robotics, nanotechnology, 3D and even 4D printing, genetics and biotechnology, are brought under the spotlight, consolidated and developed together. Intelligent home systems, factories, farms or entire cities will support tackling all issues, from the supply chain management to the climate change.

Concomitantly with these technological revolutions, the socio-economic, the geopolitical and the demographic developments also materialize, and each link in the chain interacts in several directions and intensifies the other. While these changes bring a promise for future prosperity, the reconfiguration of economic areas and economic activities, and the restructuring and job creation in the new system, they still present major challenges that require proactive adaptation by corporations, governments, societies, and individuals.

In this context, existing industries are adapting and new ones are born. Many occupations will thus undergo fundamental transformations. Together, the technological, the socio-economic, the geopolitical and the demographic developments and interactions between them will generate new categories of occupations and jobs that will partially or even totally replace the existing ones.

Neither technology nor the creative destruction that comes with it is an exogenous force over which control cannot be exercised. Mankind is responsible for guiding its evolution through the decisions taken daily, both as citizens, consumers or investors. Thus, there is the obligation but also the right to take advantage of the opportunity and power brought about by this newly created context and to lead it towards a future that reflects common goals and values.

In order to do this, we need to develop a comprehensive and world-wide picture of how technology affects life and remodels the economic, social, cultural and human environments. There has never been a more promising but at the same time more dangerous time. However, current decision makers are too often trapped in the traditional linear thinking, or too absorbed by the multiple crises that require their attention to think strategically about the disruptive forces and the innovation that supports the modeling of our future.

References

Atkinson, R.D., & Court, R.H. (1998). *The New Economy Index: Understanding America's Economic Transformation.* Progressive Policy Institute Technology, Innovation, and New Economy Project, Washington DC.

Baumol, W.J., Litan, R.E., & Schramm, C.J. (2009). *Good Capitalism, Bad Capitalism and the Economics of Growth and Prosperity*. Library of Congress Cataloging, USA.

Bratianu, C. (2007). Thinking patterns and knowledge dynamics. In Remenyi, D. (Ed.), *Proceedings of the 8th European Conference on Knowledge Management,* (pp.152-156). Consorci Escola Industrial, Barcelona, Spain, 6-7 September 2007.

Bratianu, C. (2009). The frontier of linearity in the intellectual capital metaphor. In Stam, C. (Ed.), *Proceedings of the European Conference on Intellectual Capital* (pp. 97-103). Inholland University of Applied Sciences, Haarlem, Netherlands, 28-29 April 2009.

Bratianu, C. (2010). A critical analysis of Nonaka's model of knowledge dynamics. In Rodigues, S. (Ed.), *Proceedings of the 2nd European Conference on Intellectual Capital* (pp.115-120), ISCTE Lisbon University Institute, Polytechnic Institute of Leiria, Portugal, 29-30 March 2010.

Brynjolfsson, E., & McAfee, A. (2016). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies.* Retrieved from

https://www.amazon.com/The-Second-Machine-Age-Technologies/dp/0393239357.
Cantillon, R. (1755/1999). *Essai sur la Nature du Commerce en Général*. Retrieved from http://oll.libertyfund.org/titles/cantillon-essai-sur-la-nature-du-commerce-en-general-7.
Tanţău, A.D. (2011). *Entrepreneurship Gândeşte inovator şi pragmatic [Think innovative and pragmatic].* Bucharest: C.H. Beck.
Case, S. (2017). *Al treilea val. Viitorul în viziunea antreprenorului [Third wave. The future in the entrepreneur's vision].* Bucharest: Niculescu Publishing.
Casson, M. (1997). *Information and Organization: A New Perspective on the Theory of the Firm*. Oxford: Clarendon Press.
Casson, M. (2000). *An Entrepreneurial Theory of the Firm*, in Nicolai J. Foss and Volker Mahnke (Eds.), *Competence, Governance and Entrepreneurship: Advances in Economic Strategy Research* (pp.116-145). Oxford: Oxford University Press.
Cohen, W.M., & Levinthal, D.A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Sciences Quarterly*, 35(1), 128-152.
Drucker, P. (1969). *The Age of Discontinuity; Guidelines to Our Changing Society*. New York: Harper and Row.
Drucker, P. (1993). *Post-Capitalist Society.* Oxford: Butterworth Heinemann.
Drucker, P. (1999). *Societatea post-capitalistă [Post-capitalist society]*. Bucharest: Image Publishing House.
Foray, D. (2004). *The Economics of Knowledge.* Cambridge, MA: MIT Press.
Glancy, K.S., & McQuaig, R.W. (2000). *Entrepreneurial Economics*. New York: Palgrave.
Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. London: Sage.
Kahneman, D. (2011). *Thinking, fast and slow.* New York: Farrar, Straus and Giroux.
Kent, C.A., Sexton, D.L., & Vesper, K.H. (1982). *Encyclopedia of Entrepreneurship.* Retrieved from https://www.researchgate.net/publication/228314999_Encyclopedia_of_Entrepreneurship.
King, G., Keohane, R., & Verba, S. (2000). *Fundamentele cercetării sociale [The fundaments of social research]*. Bucharest: Polirom.
Kirzner, I.M. (1973). *Competition & Entrepreneurship*. Chicago: University of Chicago Press.
Nanoka, I., & Takeuchi, H. (1995). *The Knowledge creating company*. New York: Oxford University Press.
Nicolescu, O., & Nicolescu, L. (2005). *Economia, firma şi managementul bazate pe cunoştinţe [Economics, business and knowledge-based management]*. Bucharest: Economica Publishing.
OECD (1996). *Head of Publications Service*. Paris: OECD.
Parasuraman, A. (2000). Technology Readiness Index a Multiple-Item Scale to Measure Readiness to Embrace New Technologies. *Journal of Service Research,* 2(4), 307-357.
Schumpeter, J.A. (1939). *Business Cycles: A theoretical, historical and statistical analysis of the Capitalism process*. New York – Toronto - London: McGraw-Hill.
Shibata, T. (2006). *JAPAN Moving Toward a More Advanced Knowledge Economy, Assessment and Lesson*s, Volume 1.

Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations.* Retrieved from https://eet.pixel-online.org/files/etranslation/original/The%20Wealth%20of%20Nations.pdf.

Văduva, S. (2004). *Antreprenoriatul. Practici aplicative în România și în alte țări de tranziție [Entrepreneurship. Applying practices in Romania and other transition countries].* Bucharest: Economica Publishing House.

Wennekers, S., & Thurik, R. (1999). Linking Entrepreneurship and Economic Growth. *Small Business Economics*, 13(1), 27-55.

World Economic Forum (2015). *The future of Jobs. Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution.* Retrieved from http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf.

Zahra, S.A., & George, G. (2002). Absorptive capacity: A review, reconceptualisation, and extension. *Academy of Management Review,* 27(2), 185-203.