

INTELLECTUAL CAPITAL AND THE DIGITAL ECONOMY

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Abstract. *Changes in today's economy are the subject of many international conferences and debates. On the one hand the benefits of digitization are being discussed, but on the other hand there is a growing appreciation of genuine ideas, innovation and creativity. Consumers in all sectors tend to make increasing use of the internet and the information available on various websites. Markets are selling more and more diverse products and services, and customers seem to be increasingly interested in novelty. It is very difficult to reap the benefits of the digitization of the economy at the same time. Awareness of the challenges related to intellectual capital and technology will help to better manage the internet, the opportunities offered by artificial intelligence because it is absolutely necessary to put the human interest at the forefront of all actions. We set out to highlight the main factors that have contributed to the development of the digital economy, as well as the challenges of intellectual capital in the context of the digital economy.*

Keywords: *intellectual capital (IC), artificial intelligence (AI), disadvantages, intangibles, drivers, digital economy.*

JEL Classifications: M41

1. Introduction

In recent years there has been more and more discussion about digital platforms, online websites, taxation of the digital economy and regulatory adaptation. It is perfectly normal for society to evolve and for companies offering services or products to try to respond as quickly and appropriately as possible to customer needs, but it is very important that any activity does not limit the development of intellectual capital or human resources in general. The digital economy offers a wide range of opportunities, but these cannot be fully realized unless efforts are made to improve the education system and the development of digital skills. The traditional economy relied heavily on physical assets, whereas now there is a great emphasis on intellectual property, customer and investor relations, employee skills. We can consider intellectual capital a central intangible of the digital economy. Knowledge is being applied to find new methods, algorithms to lower costs and increase efficiency. Technology is a timely method of distributing information, exchanging ideas, promoting new products and services, analyzing large volumes of data, using innovative strategies. More than half a

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billion people use machines that contain as much information as many libraries, music or videos (Ayres & Williams, 2004).

If we were to refer to the common points of the two concepts, intellectual capital and digital economy, then we could refer to products, new services, evolution and competitiveness: in both cases development is the right method for progress, human capital needs information and experiences to develop its skills and abilities and here we refer not only to the human need for integration, employment, but also to his financial needs and advancement in social steps.

2. Basic content.

Today, participants in the world's markets are interacting according to new rules, also resulting from the need for entrepreneurs to respond to customer demands. In their journey to maintain competitive advantage, organizations have always been looking for new solutions and ideas that can secure them leading positions and numerous customers. The Internet has changed the way we do business, both because of the opportunities it offers: the speed with which products or services arrive at the customer's door, electronic payment methods, but also because of the challenges: companies must take certain security measures to ensure the safety of payments, data protection. Se presupune că noii algoritmi vor monitoriza mult mai detaliat tranzacțiile, procesele economice, iar astfel nivelul corupției, al utilizării banilor nefiscalizați va scădea considerabil.

Figure 1 illustrates the most important aspects that have contributed to the development of the digital economy which have provided a new way of organizing activities for both managers.

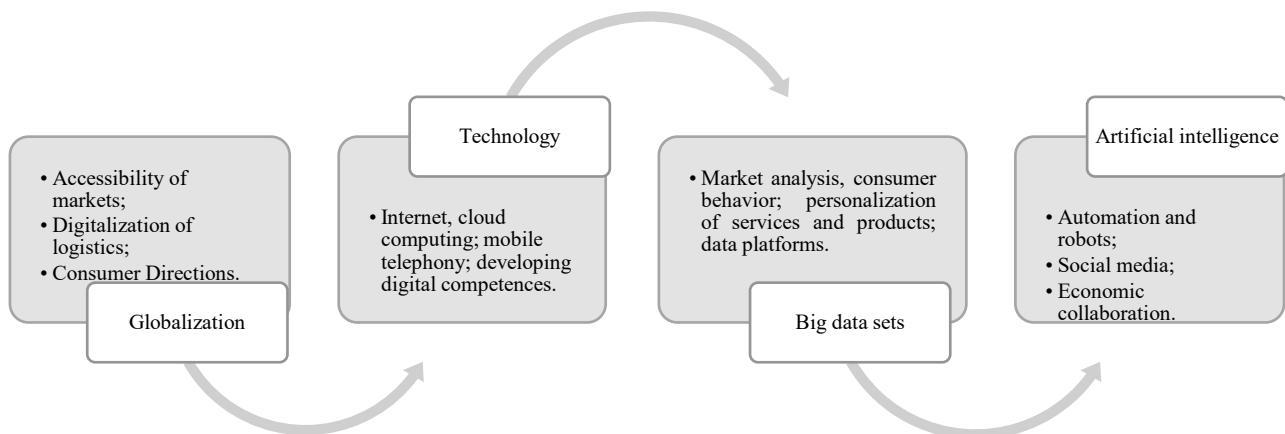


Figure 1. Factors driving the digital economy

Source: authors processing

We ask what is the role of intellectual capital in the digital economy and whether the digital economy is the underlying factor behind the evolution of intellectual capital or vice versa? Economic value is the product of the application of knowledge held by a person, part of a company, whose creativity can contribute to the optimization of activities for profit. Because the economy in all its forms is all about the human factor, we could say that it is the first concept, that of human capital, which is one of the driving forces of the digital economy.

It is true that we can access a large set of databases, of information, but they could not be of real use to us if we did not know how exactly to use them, so basically without knowing why exactly we are looking for information, how we should apply it to our activity so that it creates more value to our

activity, if we did not have a filtering culture with the help of the brain we would not know how valuable the results found are or how insignificant they are for the activity carried out. We should not forget that the algorithms, the software available were also created by human beings, improved with the help of technology, so that in the end they still correspond to human needs.

Global collaboration and exchange of information are a great advantage, for example in the field of medicine it improves the quality of customer service, prevents medical errors, increases investment in R&D for the development of new devices or drugs. It is undoubtedly a stage of the economy when physical assets are so dependent on non-physical assets.

From another point of view, in the context of the digital economy, intellectual capital also entails disadvantages or challenges illustrated in Table 1, among which we highlight the difficulty in the quantification process, the possibility of copying, costs, high costs of attracting and retaining highly qualified staff. We are also talking about a high pressure that is human resource oriented, and the dependence on technology can increase the degree of sedentarism and influence the quality of professional skills. Cyber-attacks are a threat as well as the dependence of companies on the Internet because many of them use servers, software programs where a considerable amount of data is uploaded, the inability to access them even for a short period of time can affect the activity of the ethnos.

Table 1. The disadvantages of intellectual capital in the digital economy

Disadvantages	Explanations
Complexity of assessment and quantification	Intangible assets are a category for which there are still no clear valuation rules. Its quantification must be done with great caution because it can significantly influence the total value of the firm.
Company dependence on the skills of certain employees.	A company can depend on the skills of its employees, in activities such as medicine, football, fashion, they can add value to the brand. In addition, some knowledge cannot be learned by new employees from virtual data storage alone. Training and education of a key employee requires long periods of time.
Cyber attacks	Companies store business plans, customer information or algorithms on electronic media. Because they are easily copied and the costs of securing data are high, duplicating or distributing them can damage customer or investor confidence, leading to substantial financial losses.
Constant allocation of resources for CI evolution	There is no doubt that every resource allocated by the company in a certain direction is based on an expense incurred in order to register, later on, certain gains, especially in the case of small companies it is very difficult to decide on the distribution of time or money for the participation of employees in different courses, since the presence of these employees in the company for a long period of time is uncertain. In the case of large companies it is also costly because the activity is larger, more people can perform the same task, so it is necessary that a larger number of people benefit from information, training and development courses.

Source: authors processing

Technology is indeed a trend that is bringing improvements to the company so that it can perform at a high level, but a trend must also be the investment in employees because their contribution is equally valuable (Sveiby, 1997), people in management structures need to pay more attention to the knowledge and skills of employees, who are a valuable source of intangibles, because they are not just performing a task, but contributing directly to the improvement of each process, product or service. Because measuring intangibles has been a challenge for several decades, the above-mentioned author has created his own way of quantifying intangibles based on external structure, followed by internal structure and skills, qualities as well as competencies all rolled into one term: competencies. These, according to the author, are to be broken down into three specific indicators: the first of growth, the second of efficiency and the third which refers to balance, continuity and stability. The same author has proposed a methodology for quantifying IC that provides for external, internal structure and competencies, broken down in turn into growth, efficiency and stability indicators. In the same context, (Bontis, 1998), proposed an explanation of intellectual capital as being based on knowledge already stored, but also circulating knowledge: shared or received in exchange. Referring to the market value of the organization he stated that it is composed of both intangibles and intangible assets owned.

3. Conclusions.

Intangible capital has evolved driven by its needs. Digitalization in turn has two essential components, intellectual capital and technology. It is difficult to say which is more important, what is certain is that the interaction between these elements can generate ideas for innovative strategies, products or services. In today's digital economy the speed of transactions is impressive, sometimes this phenomenon itself propels intellectual capital, sometimes the reverse. The central interest of the big economic giants, who have huge successes to run, must always be aligned with the interest of the citizen. A healthy digital economy must not only be geared towards making revenue in short periods of time, but also towards economic, social and political harmony, even if there are companies that have made astonishing profits in times of war or pandemics. The effort must be materialized in patents, democratic, healthy relationships with investors, customers, recipes for life-saving drugs, chemical formulas, brands that will then serve both the company's profit-making purpose and the needs of customers. Propelling and utilizing the benefits of the digital economy cannot be achieved without the involvement of intellectual capital. On the one hand the digital economy with its possibilities to create new things, to access a wide variety of information and to analyze large volumes of data boosts the development of creativity, research, development and innovation. On the other hand, without the contribution of human resources, the digital economy would not be able to influence global markets as much. Intellectual capital is difficult to assess and measure and the digital economy faces challenges related to security, privacy and unequal access to technology. The rapid pace of change and increasing competition calls for clearly defined regulations and enforcement rules that will allow relatively easy enforceability, comparability and transparent reporting.

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