HUMAN CAPITAL AS A COMPONENT OF THE BUSINESS MODEL: THREATS FROM ARTIFICIAL INTELLIGENCE AND A PRAGMATIC APPROACH IN THE ERA OF MODERN CHALLENGES

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Abstract

The purpose of this article is to examine the risks associated with artificial intelligence (AI) within the context of economic sciences, with a particular focus on the socio-economic transformations of the 20th and 21st centuries. The authors emphasize that the fundamental principle guiding mega-structures such as international organizations remains monetization rather than implementing positive changes in AI-human collaboration. Methodology/methods. The article employs a literature review methodology to investigate existing research frameworks and theoretical perspectives on the intersection of AI and economic practices.

The scientific aim of this study is to identify and discuss the threats posed by AI arising from human greed and the operational mechanics of AI, highlighting the differences and sources of these threats. It aims to propose a balanced approach that emphasizes comprehensive education and a shift from the accumulation of financial assets towards the valorization of knowledge and added value.

By reviewing scholarly articles, books, and reports, the study synthesizes key findings to present a comprehensive understanding of the challenges and implications of AI integration into economic systems. Key observations include:

- AI should enhance rather than replace human development.
- Overreliance on AI may erode fundamental human skills.
- Ethical considerations and privacy protection are paramount in AI integration.
- Harmonious coexistence of technology and human values is essential for sustainable business models.

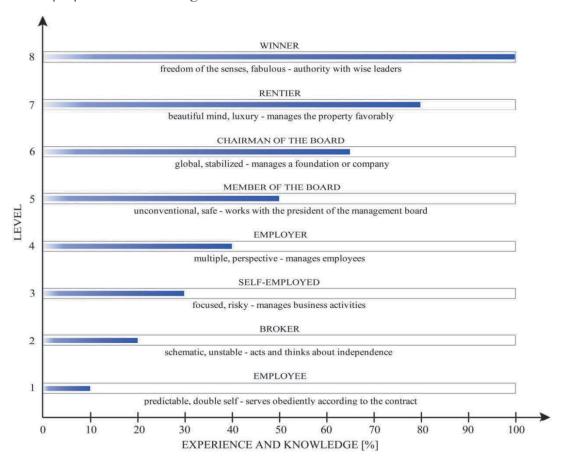
The conclusions of the study emphasize the need for integrating AI with a humanistic approach, ensuring that technology supports rather than diminishes human capabilities. Businesses must strive for a balance where AI augments human tasks, enhancing productivity and creativity without compromising human autonomy and creativity. The study suggests that AI should be viewed as a supportive tool, not a dominant force, in business processes. The future of business lies in fostering environments where AI and human potential coexist harmoniously, promoting both innovation and humanism.

Keywords: human capital, entrepreneurship, technological change, artificial intelligence, management, knowledge.

JEL Classification: J24, L26, O33, M10, M15, D83.

INTRODUCTION

The business model is the foundation of every organization. It is a tool whose purpose is to ensure the efficient functioning of the enterprise - a system of interconnections, elements and relations, arranged in a specific working dependency pattern, which is an image of the operating strategy of each entity. A characteristic feature of a well-arranged model (and therefore of the entrepreneur himself (Kuchciński, 2022) is a certain flexibility that allows for adaptation to the often dynamically changing conditions of the national economy (Brzózka, 2009). It includes elements that distinguish a given company from others, including: the target group towards which the service or product offered is inclined, distribution channels of these goods and services, its added value, and therefore the goods produced or services provided, relationships with customers, key resources, revenue structure, and finally developed activities and possible partnerships or cooperation(Brzózka 2009). Human capital is one of the key components of a business model, it includes the skills, knowledge, experience and abilities of employees that contribute to creating innovation (Kuchciński, 2017) and value in the organization and in Scheme shows one of the aspects of the multidisciplinary 1 K. M. Krusiec Model, which defines, among others: the above factors in the form of levels of development of human entrepreneurship in society, taking into account his style of action, type of life and purpose of functioning.



Scheme 1. Levels of human entrepreneurship development according to the multidisciplinary K. M. Krusiec Model

Source: Authored and prepared by Krzysztof M. Krusiec.

However, in the era of dynamic development of technology, especially artificial intelligence (AI), human capital faces new challenges and threats. The use of AI may lead to the replacement of some roles and functions in companies, which poses a risk to employees and may have a positive impact on the stability and efficiency of the organization.

Current marketing trends and new technologies offer more and more opportunities to manage customer relationships so that individual campaigns and other marketing communication methods become as effective as possible (Lisník, 2017).

What is extremely important is the fact that nowadays we operate in overlapping realities and very diverse, often different perceptions of business. At the beginning of the last century, in the system created for wealthy entrepreneurs, the employee was not a foundation, but merely an easily replaceable element in the entrepreneur's machine. Occupational health and safety requirements and awareness in this area were almost non-existent, and the working conditions themselves were sometimes extremely unfavorable, insulting to human dignity, and the workers themselves were very often exposed to factors that threatened their health (Gotowicz, 2013). To this should be added the fact that, according to the 1921 census, approximately 34% of the Polish population was severely illiterate, and therefore, there was little awareness of labor law, which was the result of hundreds of years of living in a caste society (polskieradio.pl, 2023). It was similar throughout Europe, which suffered from the remnants of previous feudal systems of functioning - whoever had money and social status was a kind of "god" deciding on the fate of the poor (ONZ, 1957). This situation changed with the post-war reconstruction period after 1945. At that time, the focus was on at least basic education of society, which resulted in a gradual change in the scale of illiteracy (Britannica, 2023). Due to the construction of the new world, the social position of the working class increased, this small, underestimated element of the entrepreneur's machine gained a different status. Basic occupational health and safety conditions were introduced, customs were changed, and instead of working in the field or factory, the child was sent to school where he received his education, and this allowed for the development of a self-aware society. In the 1930s - 1960s, As a result of social protests and the actions of trade unions and legislation, working hours began to be shortened. Over the decades, it has been possible to introduce approximately a 40-hour working week and regulate legal requirements in terms of the employment of minors.

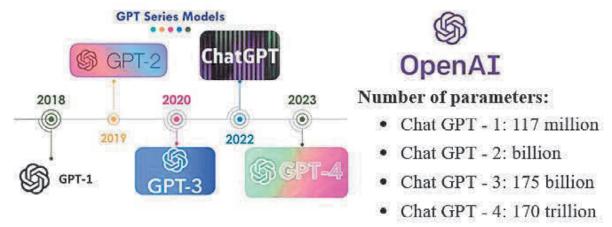
Three historical periods: the interwar period, the Polish People's Republic and contemporary Poland related to education in Poland were characterized by different features and assumptions that shaped the essence and structure of education, which significantly contributed to social changes resulting from education (Palej, Krusiec, 2024).

Nowadays, working conditions in Western countries have changed significantly and visible exploitation of workers is becoming less common. The business model is constantly evolving. In the 1990s and at the beginning of the 21st century, the business model was based mainly on traditional organizational structures, in which the key elements were production, marketing, sales and customer service (Dichter, 1992). Enterprises sought to optimize costs through outsourcing and offshoring, the aim of which was to increase operational efficiency and reduce (sometimes drastic) expenses. At that time, attention was paid to the development of information technologies and e-commerce, which revolutionized the way of doing business - the era of the 4.0 economy began (Krusiec, 2019).

HUMAN CAPITAL

The current business model is undergoing transformation along with technological progress, especially in the field of artificial intelligence (AI), the era of which has revolutionized social functioning. From this moment a "new era" of man begins.

Human capital is supplemented with AI competences and capabilities, and processes are automated, especially repetitive ones, as exemplified by rapidly developing chatbots (graph 1), whose task is, among others, customer service regardless of the time of day or day of the week.



Graph 1. ChatGPT development

Source: A. Kuchciński, Multi multa sciunt, nemo omnia. O zastosowaniu sztucznej inteligencji, inaugural lecture on October 21, 2023, Staropolska Akademia Nauk Stosowanych w Kielcach.

Artificial intelligence writes scripts, codes, analyzes data, creates graphics, texts and innovations, and plans the functioning of entities. Future business models will be increasingly more deeply coupled with AI technology, which requires modern people to almost constantly adapt to dynamically changing work realities. The situation is stimulated by the fact that part of the modern world has moved to the Internet, where (especially) highly developed communities spend more and more time. The technologies discussed have the potential to not only revolutionize the functioning of "Homo Sapiens Interneticus", but also the entire world as we know it. The moment has come when AI can replace humans in most jobs, but it will also cause a progressive degradation of IQ (Bratsberg, Rogeberg, 2018). We should therefore act in accordance with the social interest, not the corporate interest, because this system is directed only in one direction, the goal of which is profit, not human well-being.

Man is by nature greedy and often ruthless, will therefore use AI to increase the well-being of the individual at the expense of the well-being of all (Palej, 2023).

Artificial intelligence is undoubtedly a monument to human genius, but at the same time it is nothing in the case of the biblical colossus, it may turn out that the steel giant has feet made of terracotta, which are unable to support its weight for a long period of time (Biblia, 2015). The threats posed by AI result from human nature itself - greed and the pursuit of unlimited wealth, so it is difficult to expect that international megastructures will suddenly give up increasing profits in order to improve the well-being of society (Biblia, 2015). However, the same Bible also mentions that unitedly we can achieve anything, but today it seems impossible.



Graph 2. What is artificial intelligence associated with?

Source: Stills from movies Matrix and Terminator, compare: A. Kuchciński, Multi multa sciunt, nemo omnia. o zastosowaniu sztucznej inteligencji, inaugural lecture on October 21, 2023, Staropolska Akademia Nauk Stosowanych w Kielcach.

AI (graph 2) does not get tired, is indestructible, immortal, "omniscient", reproduces (Alhijawi, Awajan, 2024) and improves itself, is integrated with the entire world and remains focused on the goal it strives for, having neither conscience nor altruism, it operates within codes created by corporations whose goal is profit just to have as much power as possible.

THREATS

Threats from AI can be divided - according to the authors - into two categories: some result directly from human activity, the other from nature based on artificial neurons (self-improvement and self-learning). In both cases, it is the work of an intelligent contractor, which is a human, but the artificial neural network gives the AI a certain freedom, and therefore it may undergo evolution similar to biological one. The human factor includes, among others: social threats (e.g. unemployment and social inequalities), ethical (e.g. accumulation of profits, biases resulting from faulty algorithms or threats to freedom - surveillance) (Katrenčík, et al., 2023) or technological (e.g. system failures, fatal accidents). However, to related factors AI itself includes, among others: the emergence of a superintelligence superior to humans (which could replace the human race, just as humans have evolutionarily displaced other species) or the acquisition of self-awareness by AI.

TRANSHUMANIZM

Another threat, apart from artificial intelligence, is transhumanism, which is based on the belief that technology is a way to improve human life by improving its intellectual abilities or condition (Grabowski, 2015). This idea assumes that learning can be mechanical, so self-development involving working on oneself can be significantly shortened and facilitated by installing another application in the human brain coupld with technology (Bostrom, 2003). In this context, about the production of a new human being, reaching beyond the existing framework of Homo Sapiens Sapiens in order to create a kind of hybrid - the work of AI embedded in a human being. It is obvious that in the first phases of transhumanism, the potential derived from technology coupled with humans will be available only to the richest, which will thus contribute to deepening the differences and the degradation of the human species into ever greater poverty and unfitness for life in society. At the same time, it is the end of the stage of self-improvement by working on one's own potential, which means the degradation of subsequent generations of people and the production of custom-made children, perfect

according to the catalog or the parents' imaginations, whose only limitation will be their wealth (Grabiński, 2015). Transhumanism fits into the broad context of contemporary economic and technological changes, in a world where technologies have a real impact on every sphere of life, it seems to be the only way to perfect evolution. The disadvantage of this solution is the degradation of the human role, deprived of internal modifications with technologies and synchronizing them with humanoids produced on an increasingly larger scale - a new race inhabiting Earth in an additional new cybernetic reality. In an ideal world and there is nothing wrong with its transformations, because they serve man as a community, not individuals - if they serve. Unfortunately, nowadays, considering the actions of corporate megastructures whose management is based mainly on hard business models, we should expect profits to accumulate in the hands of a small percentage of people creating their own universes. Therefore, instead of focusing only on the transformation of the world, we should also focus on ensuring appropriate living conditions for the entire planet - not for individuals or a few countries, but for each of us.

PRAGMATISM

Contemporary conscious development of entrepreneurship must be based on the potential of a person who strives to use technology, not to rely on it, the result of which is to be a self-sufficient individual who functions intellectually without any obstacles in the modern "dual reality".

According to the authors, in addition to the broadly understood investment in AI and automation, it is first of all necessary to ensure the stable and humane functioning of societies around the world, with the rejection of the accumulation of wealth in the hands of the richest and, it should be noted, it is not about broadly understood communism or other relocation of resources, but about educating new generations so that everyone has a chance to receive appropriate education regardless of race, origin or social status.

The basis for self-development must be the altruistic perception of reality typical of soft business models. At the same time, it should be emphasized that the indirect goal is not to equalize all people in accordance with the scientific consensus, but to build a reality in which knowledge and skills are important, not acquaintances, and in which wealth or origin are not the only basis for building authority.

CONCLUSION

The use of artificial intelligence in business carries enormous potential, but requires a balanced approach that integrates technological innovations with humanistic values. Human capital, with its unique features such as empathy, interpersonal relationships and humanitarianism, should remain a central element of every organization and, due to its originality, determine the trend of future business models. The conclusions we should take into account are:

Integration of technology with humanism

Technology should support and enhance human development, not replace it. While AI can process vast amounts of data, identify patterns, and make algorithm-based decisions, it cannot replicate the complex aspects of human emotional and social intelligence. Interpersonal relationships, empathy and altruism are the foundations of a healthy life and an effective work environment that fosters creativity, innovation and the long-term success of the organization.

Impact on skills and competences

Over-reliance on AI can lead to the erosion of fundamental human skills. Despite technological advances, skills such as written numeracy, contextualization, reasoning, etc. remain important. Maintaining core competencies ensures that people are there able to understand and control processes that AI only supports. Without them, there is a risk that humans will become too dependent on technology, which may lead to a reduction in our ability to make decisions and solve problems on our own.

Ethics and privacy

Integrating AI into business models also requires deep consideration of ethical and privacy issues. Algorithms must be designed and implemented in a transparent way to ensure that decisions made by AI are not arbitrary and that they are morally fair and do not discriminate against any social groups. Furthermore, protecting personal data must be a priority to gain the trust of users and customers.

Harmonious coexistence

Businesses must strive for harmony between their use of technology and cultivating human values. Making optimal use of AI is about supporting people in their tasks, enabling them to achieve higher productivity and creativity, while maintaining and enhancing their unique human abilities.

The integration of technology with human potential should be carried out in such a way that the technology serves as a supporting rather than a dominant tool. The future of business depends on the ability of organizations to create environments where technology and humanity work together in a sustainable way, promoting both innovation and humanism. Artificial intelligence offers unprecedented opportunities for business transformation, but its implementation must be carefully balanced with human values. Technology should support human development, not replace it. Modern illiteracy concerns not only the lack of ability to read and write, but in a broad sense it comes down to limiting the perception of the mind and creating a worldview as a result of a message whose main goal is arbitrariness. Contextualization regarding certain phenomena and the description of mechanisms aims to create an appropriate space for AI, but this cannot be done at the expense of limiting the autonomy and creativity of the population. It is crucial that enterprises create environments where AI and human potential work in harmony, promoting innovation, efficiency and human values that remain irreplaceable.

Humanity consists in maintaining one's inner independence, one's integrity. If they can make you betray what you love most, then they have already defeated you.

George Orwell

REFERENCES

- Alhijawi B., Awajan A., Genetic algorithms: theory, genetic operators, solutions, and applications, [in:] Evolutionary inteligence, vol. 17, 2024.
- Biblia Stary i Nowy Testament. Najnowszy przekład z języków oryginalnych, Towarzystwo Święty Paweł, Częstochowa 2015, Dn. 2:31-45.
- Bostrom N., Transhumanist Values, [in:] Ethical Issues for the 21st Century, 2003.
- Bratsberg B., Rogeberg O., *Flynn effect and its reversal are both environmentally caused*, 2018, dost. online: https://www.pnas.org/doi/full/10.1073/pnas.1718793115.
- Brzóska J., Model biznesowy współczesna forma modelu organizacyjnego zarządzania przedsiębiorstwem, [in:] Organizacja i zarządzanie: kwartalnik naukowy, t. 2, Politechnika Śląska, 2009.
- Dichter F., *The Organization of the '90s, "McKinsey Quarterly"1992*, dost. online: https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/the-organization-of-the-90s#/.
- Education after World War II, https://www.britannica.com/topic/education/Education-after-World-War-II.
- Gotowicz A., Wpływ warunków pracy na stan zdrowia robotników przemysłowych w guberni piotrkowskiej w 2 połowie XIX i na początku XX wieku, [in:] Roczniki dziejów społecznych i gospodarczych, tom 73, 2013.
- Grabińska T., Zagrożenia bezpieczeństwa społecznego w ideologii transhumanizmu, [in:] Kultura bezpieczeństwa. Nauka-Praktyka-Refleksje, nr 18, 2015.
- Grabowski M., Transhumanizm, geneza założenia krytyka, [in:] Etos, nr 28, 2015.
- Katrenčík, I., Mucha, B., Zatrochová, M. *Ethical Implications of Artificial Intelligence Data Usage: A Case Study of Slovakia and Global Perspectives*. In IDIMT-2023: New challenges for ICT and management. 1. vyd. Praha: Prague University of Economics and Business, 2023, S. 365-372. ISBN 978-3-99151-176-2. DOI: 10.35011/IDIMT-2023-365.
- Krusiec K. M., *Przedsiębiorczość jednostki w świetle rozwoju gospodarki 4.0 świadomość zagrożeń*, [in:] *Zeszyty naukowe WSEI*, nr 15, Wyższa Szkoła Ekonomii i Informatyki w Krakowie, Kraków 2019.
- Kuchciński A., Fundusze pożyczkowe w finansowaniu działalności MSP, Wydawnictwo Społecznej Akademii Nauk, Łódź-Warszawa 2017.
- Kuchciński A., Organisation and functioning of the financial system for support of enterprise development by business environment institutions in Poland, Old Polish University of Applied Sciences in Kielce Publishing House, Kielce 2022.
- Lisník A., Sales promotion and using social media in the Slovak internet book market, Slovak University of Technology in Bratislava, 2017.
- Palej A., Krusiec K. M., *Nie należy myśleć i zapominać, należy myśleć i działać, wówczas działanie stanowi świadectwo myślenia*, Oficyna Wydawnicza Staropolskiej Akademii Nauk Stosowanych w Kielcach, Kielce, 2024.
- *Walka z analfabetyzmem w II Rzeczpospolitej*, https://www.polskieradio.pl/39/156/artykul/2399329,walka-z-analfabetyzmem-w-ii-rzeczpospolitej-infografika.
- World illiteracy at mid-century. A statistical study, United Nations Educational, Scientific and Cultural Organization, 1957.

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