Bulgarian Journal of Agricultural Science, 32 (Suppl. 1) 2026
Agricultural Academy

DOI: https://doi.org/10.61308/KYBZ5813

White economy – creativity, digitalisation, precision agriculture, healthcare

Sonia Georgieva* and Veselina Shalamanova

Faculty of Economics and Business Administration, Department of Economics, Sofia University "St. Kliment Ohridski", Sofia, Bulgaria
**Corresponding author:* sonia@feb.uni-sofia.bg

Abstract

Georgieva, S. & Shalamanova, V. (2026). White economy – creativity, digitalisation, precision agriculture, healthcare. *Bulg. J. Agric. Sci., 32*(Suppl. 1), 41–47

The article outlines the main framework of the areas covered by the white economy. In scientific literature, the term "white economy" is not defined unambiguously. It has a broad meaning, including sustainability, digitisation, creativity, and healthcare. The study examines various dimensions of the white economy, focusing on its impact and role in the development of agriculture through digitalisation. Hence the importance of this impact on healthcare. The authors pay particular attention to precision agriculture, whose expansion and specialisation are bringing increasing benefits in the modern world. New trends in the development of the agricultural sector related to production optimisation, improvement of the nutritional composition of products, sustainability, and effective management of economic processes place precision agriculture at the heart of modern agriculture.

Keywords: white economy; digitalisation; precision agriculture

Introduction

The term "white economy" is not defined unambiguously in the academic literature. It is found as an antonym of the informal economy, but it is also used as a synonym for sustainability in economic development and energy openness (Bellintani, 2015). Historically, it has even been used metaphorically in referring to the racial income divide between blacks and whites, and their individual contributions to the US economy in the late 1970s (Villemez, 1978). The definition of the "new economy" has also been used in scientific research. It refers to that area of the white economy which is related to the digitalisation of economic processes and the new generation of people whose activities allow them to work mobile and from anywhere. It also includes the field of healthcare, which sometimes in a narrower sense refers to professions related to the care of the elderly and people with disabilities (Szostak, 2018). The white economy, in the areas of digitalisation and healthcare, also has a significant impact on the modernisation of agriculture. Its impact is achieved through the use of high-tech tools for production and extraction, which have a fundamental effect on the quality of people's work and lives.

Douglas McWilliams, in his book "The flat white economy: how the digital economy is transforming London and other cities of the future" (McWilliams, 2015), describes the flat white economy as a combination of creative economy and digital economy. His research is limited to the UK. In another study, he develops the thesis that immigration is a source of economic growth, and it is the UK's "secret eco-

nomic weapon" (McWilliams, 2023). In this expanded context, the author outlines the challenges and prospects of the white economy as a key tool for a new generation of people who are characterised by flexibility, talent and dynamism.

Creativity as an aspect of white economy

The term "creative economy" is somewhat associated with the former UK Culture Secretary, Chris Smith, who synthesised the main ideas of the creative economy movement in his book Creative Britain (Smith, 1998). His understanding is essentially that these are activities that stem from individual creativity to create wealth and jobs through the generation and use of intellectual property. In retrospect, the origins of this concept come from the British Labour government with Tony Blair as Prime Minister, when in 1997 – 1998 the term "creative industries" was used for marketing purposes. Subsequently, this aspect gained wide popularity and was used as a political slogan in cultural policy and diplomacy. Going back even further, we find references to earlier conceptions of the notion of "culture industries" in the meaning field of mass communication (Adorno and Horkheimer, 2000).

The definition of "creative industry" is gradually becoming a broad tool that can be modified and applied depending on the political goals of the government. The strategy of the creative economy is justified by the need to expand economic and social outcomes in order to make the economy more competitive. In essence, it represents the creation of new spaces that institutions are responsible for maintaining, and they define the limits of the so-called „creative space" (Markusen, 2014). On this principle, a chain of necessity for innovation, incentives and improvement is formed for the purpose of creative entrepreneurship in an endless chain cycle. The movement is based on the theoretical propositions of the new class (Gouldner, 1979), revived in the USA by Richard Florida with his ideas on the rise of the „creative class" (Florida, 2002). It includes, according to the author, one-third of Americans, which fuels policymakers' belief that the conditions exist for the creation of new creative spaces, even creative cities, as a driving force for innovation.

The concept of the creative economy is becoming widespread in the European Union through the digital revolution (Schlesinger, 2016). The use of phrases such as „creative cities", „creative skills", „creative innovation", etc. is increasing, which attempts to describe the ongoing processes of transformation in production, consumption and trade under the heading of „digital creative economy". To a certain extent, this definition can also be applied to agricultural production, which is optimised through digital mechanisms and "creative methods" in order to increase labour productivity, increase yields, and improve the quality of food products.

Creativity is largely identified with human capital and intellectual property (Howkins, 2001). In this regard, the European Parliament identifies as significant the 2006 report „The Economy of Culture in Europe", commissioned by the European Commission from a consultancy. The following reports complement and extend the framework of the creative economy in the modern world (European Commission, 2010; European Parliament, 2012; European Commission, 2016). The creative economy is a subject of deep interest in terms of understanding the influences of creativity and culture as an engine for economic and social innovation (The Work Foundation, 2007). The rationale for the role of the creative economy as an enabler of economic growth relates to the fact that "increasing productivity at the production level is no longer a sufficient condition for securing competitive advantage". A creativity index needs to be formed to assess the creative environment in the member states of the European Union and contribute to the construction of a creative ecology in Europe through art and culture (KEA European Affairs, 2009). Therefore, the emphasis falls on a change of focus in the course of economic policy making.

In 2010, the European Commission published a Green Paper (European Commission, 2010), which aims to "capture the different connotations of the terms „cultural" and „creative" across the European Union, reflecting Europe's cultural diversity". It defines 'creative industries' as the architecture of creative elements and processes in the design, advertising and other sectors. On the other hand, 'cultural industries' include the traditional arts (performing, visual, heritage), but also represent a cultural expression of the production and distribution of goods and services with commercial value. The Green Paper also points to the need for a strategy to create a "genuine single market for online content and services", which in 2020 is embodied in the Europe 2020 strategy. Despite the efforts made, there is still a lack of a clear definition of terms in the EU. Therefore, each member state in most cases makes its own interpretation and therefore implementation of policies on the creative economy on its territory. In the abstract, it can be assumed that this type of economy, which does not deal absolutely with economic indicators alone, as a general concept adheres to the thematic definition of the original UK version.

In this line of thought, Douglas McWilliams presents the continuation of the creative economy in the context of business environments. According to the author's description, people of the new generation, representatives of this segment of the economy, wear jeans instead of suits, "own expensive technology products, but are generally less materialistic than their parents' generation" (McWilliams, 2015). The white economy includes tech giants Facebook, Google, Apple, X

(the former Twitter), Instagram, etc., which are displacing traditional sectors of the economy. The growth of their start-ups is progressively increasing as well as their success in the market. This is largely due to the behaviour of consumers who are directing their consumption towards new technologies. Changes in the economy are following the increased demand for innovative technologies and so are cutting-edge 3D printers, the refinement and application of artificial intelligence, robotics, working with large databases, virtual reality and much more. The development of the digital economy goes hand in hand with the protection of the environment and achieving balance in nature and society. In this sense, the white economy is often associated with the green transformation and meaningfully identified with sustainable development.

The majority of people working in the white economy are the so-called "millennials", who are the new generation, namely those born in the late 1980s to 2000 (Stein, 2013), referred to as Generation Y. In different countries, millennials have different characteristics, but because of globalisation, there are also common features that distinguish them significantly from their predecessors. The main similarities between Gen Y people are high technological consumption, coworking skills, innate digital creativity, higher education, getting married later in life, etc.

The white economy, which is linked to the digital new economy, is part of the fourth industrial revolution and opens up different opportunities and new challenges. In economic terms, the fourth industrial revolution builds on the third and is characterised above all by the creation of innovative technologies and their application in all areas of the economy. Its development is not linear but exponential. According to research on industrial transformations in economic and historical development, each successive revolution displaces or eliminates jobs created by the previous one (Xu et al., 2018). In this sense, the opportunities facing the fourth industrial revolution are directly linked to innovation and higher productivity in the long term, flexibility with high levels of operability due to the removal of spatial constraints, with digitisation and sustainability over time. Agriculture 4.0 uses modern technologies that minimise manual methods and replace them with robots, GPS technologies, temperature and humidity sensors, and other tools. These help farms to be profitable in the market, efficient, and more environmentally friendly. The digital revolution in the agricultural sector can be largely summarised by the concept of precision or smart farming.

There are studies that analyse the impact of digital technologies on agriculture. Claudiu G. Bocean performs an econometric analysis of the relationship between digitisation and productivity in agriculture. In his 2024 article, he confirms a significant positive relationship between the use of digital technologies and labour productivity in agriculture, proving a correlation between digital integration and labour efficiency in the sector. The author points out that at the EU level, there are socio-economic differences between individual member states, which are related to their varying degrees of digitisation and agricultural productivity. In his main conclusions, Claudiu G. Bocean emphasises that digital technologies are a key factor in increasing agricultural productivity (Bocean, 2024).

The integration of large databases in agriculture and the use of artificial intelligence allow farmers to optimise production, reduce costs, and increase yields (Yahya, 2018). Smart farming is a developing area of application. The Internet of Things (IoT) system within Industry 4.0 has the potential to develop in agriculture and achieve new optimisations and automations in processes (Grieco et al., 2019).

According to a study based on 136 peer-reviewed articles and 28 documents with empirical data from EU projects, Digital Agricultural Technologies (DATs) make a significant contribution in five key categories: Variable Rate Technologies (VRT), Robotic Systems or Smart Machines (RSSM), Recording and Mapping Technologies (RMT), Guidance and Controlled Traffic Farming (CTF) Technologies, and Farm Management Information Systems (FMIS) (Papadopoulos et al., 2024). The same study measured in detail the impact of each of the digital resources on agricultural work. The analysis shows that VRT increases yields by 62%, reduces fertiliser use by 60%, and reduces pesticide use by up to 80%. RSSM reduces labour by 97% and diesel fuel costs by 50%. In terms of environmental sustainability, VRT is considered the most fundamental, saving 20–50% of water in orchards and vineyards (Papadopoulos et al., 2024).

Undoubtedly, DATs, including precision farming, increase efficiency and labour productivity in agriculture. Technologies enable remote control and analysis in the sector, optimising it and reducing its environmental footprint (Fountas et al., 2020).

The white economy has a positive impact on agriculture in various ways. Unfortunately, there is a lack of comprehensive data on its application in Europe and Bulgaria. The state of digitisation in this sector within the EU and Bulgaria can be judged by indirect indicators such as the Digital Economy and Society Index (DESI), surveys and studies, accumulated mainly from projects. With regard to the use of digital tools in agriculture, partial results can be found in a European Commission report on the implementation of digital technologies. The study covers 1 444 farms in nine EU member states and finds that 93% of the farmers partici-

pating in the study use at least one digital tool, and a large proportion of farmers use specific technologies for the crops and animals they raise. According to surveys, farmers are optimistic about the economic and sustainability benefits of digital technologies in agriculture (Tur Cardona et al., 2025).

The new challenges, in turn, draw attention to the social consequences of the industrial transformation, namely job losses due to the introduction of new machines and technologies, deepening inequalities in labour markets, strong interconnection of people's lives with technology, leading to increased risks of cybercrime and hacking attacks (Lambert, 2017). K. Schwab outlines the field of white economy in the context of the fourth industrial revolution as follows: "*We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before. We do not yet know just how it will unfold, but one thing is clear: the response to it must be integrated and comprehensive, involving all stakeholders of the global polity, from the public and private sectors to academic and civil society*." (Schwab, 2015).

The role of digital technology in healthcare and food quality

The technological advances of the digital economy are also reflected in the other major area of the white economy – healthcare. This part of the white economy that encompasses health and healthcare is closely linked to the areas of manufacturing, marketing, medical research and distribution of goods and services in the sector. It is divided into two main sectors – private and public. The public sector includes all services provided by public institutions – hospitals, doctors, medical specialists, general practitioners. The private sector is broader and includes the pharmaceutical industry, the manufacture and marketing of medical devices and technology, private hospitals and the private practice of doctors and health professionals. In large part, this segment of the white economy is closely linked to the most vulnerable populations, respectively, to the silver economy. In terms of symbiosis with the silver economy, the indicators by which the two are interrelated are mainly in the field of geriatrics, a branch of medicine that studies the occurrence, development, and treatment of diseases in the elderly (Szostak, 2018).

Historically, population health has been fundamentally embedded in the development of national policies, as well as global ones, throughout the 20th century and especially since World War II and the creation of the World Health Organisation (Kehr et al., 2023). High-tech medicine is seen as a tool not only to save lives but also to improve the quality of life. Improvements in medical technologies and their adequate application in the health sector correlate with sustainable results in improving people's wellbeing. One of the major problems in achieving better outcomes in the health sector as a whole is corruption in the health sector.

There are studies forming the concept that the penetration of information technology in healthcare facilities will ensure the wellbeing of the society in the long run (Campra et al., 2023). Transparency International reported that after Covid-19, the lack of transparency in Europe, in health services, increased compared to other public services (Transparency International, 2021). Europe maintains a high level of corruption in the health sector (Wysmułek, 2019). In turn, innovative technologies can support the design of internal control policies for transparency, efficiency and trust in health systems (Adam and Fazekas, 2021; Chege and Wang, 2020). Building good practices of interaction between the main elements of the white economy is fundamental to the development of the economy and society in the modern world.

According to a report by the Organisation for Economic Co-operation and Development (OECD/European Union, 2020), the crisis caused by Covid-19 has revealed latent vulnerabilities of the health system that existed before the pandemic, as well as a lack of technical, structural and human resources. The report also draws attention to the fact that health spending is mainly on treatment and not on prevention, for which there is insufficient funding. The pandemic places the emphasis on the need for a robust health service system and the quest for equal access to it.

In 2013, a collective of scientists wrote a manifesto announcing a developed approach to Fundamental Economics (FE). They argue for the need to shift the focus of industrial policy towards social sustainability and equity (Bentham et al., 2013). The manifesto identifies two main areas: the first relates to a foundational economy, which encompasses the delivery of basic goods and services; the second area includes education, health, and social activities. In the countries of Europe, FE employs about 40% of the workforce. In 2017, 44% of employees in the UK, 37% in Italy and 41% in Germany worked in FE (Bifulco and Neri, 2022). In this area of the white economy, the main difficulties are related to neoliberalisation and structural problems in the public management of the health sector in Europe (Pollitt and Bouckaert, 2004). However, through the lens of the Covid-19 experience, differences in outcomes derived through quantitative analyses of pandemic effects by disaggregating at the regional level are clearly visible (Ciccia and Javornik, 2019; Kazepov and Barberis, 2013; Wimmer and Glick-Schiller, 2002).

One of the EU's guiding policies is to ensure equal access to healthcare as a fundamental human right for citizens. The experience of the past pandemic of Covid-19, besides showing the main vulnerabilities of the system, proves interconnections with digitalisation as a link to the success of the development of health systems in the Union in technological and real terms. A major challenge in ensuring equitable access to health care is the unequal distribution between demand and supply in terms of geographical location. It is a peculiarity of health care facilities that their siting does not match the demand of citizens (Majcherek et al., 2024). This appears to be an advantage for the use of digital technology in the field, since through telemedicine (World Health Organization, 1998) it is possible to carry out medical consultation, and in some cases treatment, at different locations of the medical person and the patient. In this sense, technological innovations in digital healthcare play a key role in potentially improving the quality of health care, fulfilling fundamental objectives in the EU.

From an economic perspective, digitalisation also reduces medical costs for the same positive health outcome. It should be noted here that the combination between the digital economy and the health sector is effective in disease prevention such as monitoring and diagnosis and less so (in certain cases) for treatment. Currently, there are a number of reasons for the ineffective implementation of telemedicine in EU member states due to barriers related to both access to technology and the propensity of users to take advantage of the innovation. A study aimed at exploring the relationship between unmet needs in healthcare and digitisation at the level of EU member states highlights the need to adopt a localised approach to the deployment of technological solutions in the sector. These solutions should be part of "integrated health services", in order to achieve efficiency (Majcherek et al., 2024).

Optimisations in the crop cultivation process in precision agriculture not only lead to increased yields, but also help to make more efficient use of resources such as water and fertilisers. This leads to a reduction in waste and damage to the environment. Precision agriculture targets the specific needs of plants, which improves the nutritional quality of crops and leads to better health outcomes (Teran et al., 2025).

Agricultural practices are a key factor in determining the composition of food, as well as its quality and, consequently, its impact on health. They directly influence the biochemical composition of crops (Anim et al., 2025). On the other hand, excessive biofortification in agriculture through additives can cause nutrient deficiencies. Given the limitation of this risk, modern crop cultivation methods include biofortification strategies aimed at increasing the main nutrients in agricultural crops. The approach is designed to reduce the prevalence of micronutrient deficiencies in the population (Anim et al., 2025).

Scientific research shows that precision agriculture acts as a bridge between agriculture, health, and food security, combining economic efficiency, environmental sustainability, and improved food quality. This synergy supports the concept of sustainable development, in which human health, soils, and ecosystems are viewed as interconnected elements of a common system (Teran et al., 2025).

Within the European Union, the integration of sustainable and precise agricultural practices into national health strategies is a key element in the production of healthy agricultural products. They serve to prevent disease and contribute to the implementation of the European Commission's policies on quality of life and sustainable development (European Commission, 2024).

From the point of view of industrial agriculture, precision farming is closely linked to another aspect of the white economy, namely healthcare. Nutrition is an important part of people's quality of life and health. Sustainable agricultural practices, modern mechanisms for improving the production process, and biodiversity have a direct impact on the protection of human health. It has been established that the application of modern technologies in precision agriculture reduces the risk of diseases associated with poor nutrition (Teran et al., 2025).

Conclusion

In the context of health, the white economy is undergoing development and implementation of comprehensive measures to limit the vulnerability of the health sector. From a fundamental economics perspective, the debate extends to the concept of health services based on territorial and preventive services aimed at people's health and wellbeing (Bifulco and Neri, 2022).

The white economy, in its contemporary manifestations, is a sector that should generate sustainable development, improving the health and wellbeing of the population. Its role, as part of research and public debate, is therefore of particular importance for economic policies and social justice.

Acknowledgments

This study is financed by the European Union-NextGenerationEU, through the National Recovery and Resilience Plan of the Republic of Bulgaria, project No BG-RRP-2.004-0008.

References

Adam, I. & Fazekas, M. (2021). Are emerging technologies helping win the fight against corruption? A review of the state of evidence**.** *Information Economics and Policy*, *57*. [online], [Accessed: 01 March 2024]. Available from: https://doi.org/10.1016/j.infoecopol.2021.100950

Adorno, T. & Horkheimer, M. (2000). The Culture Industry: Enlightenment as Mass Deception (1944). *Dialectic of Enlightenment*, 94–136.

Anim, A. O., Lutterodt, H. E., Ofori, C. W., Oduro-Boateng, I., Bonsu, J. A., Ankar-Brewoo, G. M., Aduku, L. N. E., Apprey, C. & Annan, R. A. (2025) *The impact of agricultural practices on food composition – a systematic review*. *Journal of Food Composition and Analysis*, *148*, p.108388. doi:10.1016/j.jfca.2025.108388. [Accessed: 28.12.2025]. Available at: https://www.sciencedirect.com/science/article/pii/S0889157525012049

Bellintani, S. (2015). Decision support tools for efficiency in energy field. A roadmap for the improvement of earthquake resistance and eco-efficiency of existing buildings and cities. Publications Office of the European Union.

Bentham, J., Bowman, A., de la Cuesta, M., Engelen, E., Ertürk, I., Folkman, P., Froud, J., Johal, S., Law, J., Leaver, A., Moran, M. & Williams, K. (2013). Manifesto for the foundational economy, *CRESC* [online], *Working Paper* № 131 [Accessed: 02. March 2024]. Available from: https://foundationaleconomycom.files.wordpress.com/2017/01/wp131.pdf

Bifulco, L. & Neri, S. (2022). Foundational Economy and Healthcare Services: What the Covid-19 Emergency Tells Us. *Forum for Social Economics, 51*(2), 151–160. [Accessed: 27 February 2024]. Available from: https://doi.org/10.1080/07360932.2022.2056226

Bocean, C. G. (2024). A cross-sectional analysis of the relationship between digital technology use and agricultural productivity in EU countries. *Agriculture*, *14*(4), 519.

Campra, M., Esposito, P. & Brescia, V. (2023). Corporate social responsibility and technological perspectives in healthcare: An exploratory analysis of the evolution of the anti-corruption system through multiple case studies. *Corporate Social Responsibility and Environmental Management, 30*(6), 2816–2829. [Accessed: 29. February 2024]. Available from: https://doi.org/10.1002/csr.2517

Chege, S. M. & Wang, D. (2020). The role of information technology innovation in combating corruption in SMEs in developing countries: A critical literature review. *IEEE Engineering Management Review, 48*(4), 120–132. [Accessed: 29. February 2024]. Available from: https://ieeexplore.ieee.org/abstract/document/9119778

Ciccia, R. & Javornik, J. (2019). Methodological challenges for comparative welfare state research: Capturing intra-country variation in cross-national analyses. *Journal of Comparative Policy Analysis: Research and Practice*, *21*(1), 1–8. [Accessed: 28 February 2024]. Available from: https://doi.org/10.1080/13876988.2018.1551598

European Commission (2010). Green Paper: Unlocking the Potential of Cultural and Creative Industries, Brussels. [Accessed 31 May, 2024]. Available from: http://eurlex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010DC0183&from=EN

European Commission (2024) Sustaining our quality of life: food security, water and nature. European Commission. [Accessed: 21.12.2025] Available at: https://commission.europa.eu/priorities-2024-2029/quality-life_en

European Commission. (2016). Culture: Supporting Europe's Cultural and Creative Sectors, [Accessed 31 May 2024]. Available from: http://ec.europa.eu/culture/index_en.htm

European Parliament (2012). Use of Structural Funds for Cultural Projects, [Accessed 31 May, 2024]. Available from: www.europarl.europa.eu/studies/

Florida, R. (2002). The Rise of the Creative Class and How It's Transforming Work, Leisure, Community and Everyday Life. *New York: Basic Books*. ISBN: 978-0465024773.

Fountas, S., Espejo-García, B., Kasimati, A., Mylonas, N. & Darra, N. (2020). The future of digital agriculture: technologies and opportunities. *IT professional*, *22*(1), 24–28.

Gouldner, A. (1979). The Future of Intellectuals and the Rise of the New Class. London: Macmillan. ISBN: 978-0333266113

Grieco, L. A., Radesca, A., Strazzella, S. & Valecce, G. (2019). "Solarfertigation: Internet of Things Architecture for Smart Agriculture". *2019 IEEE International Conference on Communications Workshops (ICC Workshops)*, Shanghai, China, 1–6. doi: 10.1109/ICCW.2019.8756735

Howkins, J. (2001). The Creative Economy: How People Make Money from Ideas. London: Penguin.

Kazepov, Y. & Barberis, E. (2013). Social assistance governance in Europe: Towards a multilevel perspective. In: I. MARX & K. NELSON, 2013. *Minimum income protection in flux*. *Palgrave Macmillan*, 217–248. ISBN: 978-1349345335.

KEA European Affairs (2009). The Impact of Culture on Creativity. A Study prepared for the European Commission (Directorate-General for Education and Culture). Brussels: KEA European Affairs. [online]. [Accessed: 11 September 2026]. Available from: https://keanet.eu/wp-content/uploads/2019/09/impactculturecreativityfull.pdf

Kehr, J., Muinde, J. V. S. & Prince, R. J. (2023). Health for All? Pasts, presents and futures of aspirations for universal healthcare. *Social Science & Medicine*, *319*. [Accessed: 27. February 2024]. Available from: https://doi.org/10.1016/j.socscimed.2023.115660

Lambert, L. (2017). The Four Challenges of the Fourth Industrial Revolution. In *Market Mogul*. [online] [Accessed: 27 February 2024]. Available from: https://themarketmogul.com/industry-4-0-challenges/?hvid=2Gt2CE

Majcherek, D., Hegerty, S. W., Kowalski, A. M., Lewandowska, M. S. & Dikova, D. (2024). Opportunities for healthcare digitalization in Europe: Comparative analysis of inequalities in access to medical services. *Health Policy, 139*, 104950. Elsevier B.V. [online]. Available from: https://doi.org/10.1016/j.healthpol.2023.104950

Markusen, A. (2014). Creative Cities: A Ten-year Research Agenda. *Journal of Urban Affairs,* 1 – 23. [Accessed: 27 February 2024]. Available from: https://www.tandfonline.com/doi/full/10.1111/juaf.12146

McWilliams, D. (2015). The flat white economy: How the digital

economy is transforming London and other cities of the future. London: Gerald Duckworth & Co.

McWilliams, D. (2023). Measuring the Flat White Economy. *World Economics*, *24*(3), 1–18. [Accessed: 27 February 2024]. Available at: https://ideas.repec.org/a/wej/wldecn/900.html

OECD/European Union. (2020). Health at a glance: Europe 2020: State of health in the EU cycle. *OECD Publishing*. [online]. [Accessed: 25 February 2024]. Available from: https://doi.org/10.1787/82129230-en

Papadopoulos, G., Arduini, S., Uyar, H., Psiroukis, V., Kasimati, A. & Fountas, S. (2024). Economic and environmental benefits of digital agricultural technologies in crop production: A review. *Smart Agricultural Technology*, *8*, 100441. https://doi.org/10.1016/j.atech.2024.100441

Pollitt, C. & Bouckaert, G. (2004). *Public Management* (2nd ed.). Oxford University Press.

Schlesinger, P. (2016). The creative economy: invention of a global orthodoxy. *Les Enjeux de l'Information et de la Communication, 17*(2), 187 – 205. DOI: 10.3917/enic.021.0187. URL: https://shs.cairn.info/revue-les-entreprises-de-l-information-et-de-la-communication-2016-2-page-187?lang=fr

Schwab, K. (2015). The Fourth Industrial Revolution: What It Means and How to Respond. [online]. [Accessed: 21 February 2024]. Available from: https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution

Smith, C. (1998). *Creative Britain*. London: Faber & Faber.,170. ISBN: 978-0571196654. [online]. Available from: https://books.google.com/books?id=IhJtQgAACAAJ

Stein, J. (2013). Millennials: The me me me generation. *Time magazine*, *20*, 1 – 8. [online]. [Accessed: 23 February 2024]. Available from: https://www.manasquanschools.org/cms/lib6/NJ01000635/Centricity/Domain/174/millennials_thememememegeneration.pdf

Szostak, E. (2018). Regional social infrastructure from the perspective of an ageing society. *Research Papers of Wroclaw University of Economics and Business,* 537. [online]. [Accessed: 21. February 2024]. DOI: 10.15611/pn.2018.537.10

Teran, E., Chetty, M. & Touirsi, S. (2025) Agriculture and health: synergizing for a sustainable future. *Frontiers in Public Health, 13*, 1558198. doi: 10.3389/fpubh.2025.1558198. [Accessed: 22.12.2025]. Available from: https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2025.1558198/full

The Work Foundation (2007). Staying Ahead: The Economic Performance of the UK's Creative Industries. London: The Work Foundation.

Transparency International. (2021). *Global Corruption Barometer: European Union 2021: Citizens' views and experiences of corruption*. [online]. [Accessed: 10 September 2026]. Available from: https://www.transparency.org/en/publications/gcb-european-union-2021

Tur Cardona, J., Ciaian, P., Antonioli, F., Fellmann, T., Rocciola, F., Ierardi, I., Crimeni, R. & Anastasiou, E. (2025). The state of digitalisation in EU agriculture: Insights from farm surveys. Luxembourg: Publications Office of the European Union. JRC141259. DOI: 10.2760/4688498

Villemez, W. (1978) Black Subordination and White Economic Well-Being. *American Sociological Review, 43*(5), 772–776. [online]. [Accessed: 22 February 2024]. Available from: https://www.jstor.org/stable/2094549

Wimmer, A. & Glick-Schiller, N. (2002). Methodological nationalism and beyond: Nation-state building, migration and the social sciences. *Global Networks*, *2*(4), 301–334. [online]. [Accessed: 22 February 2024]. Available from: https://doi.org/10.1111/1471-0374.00043

World Health Organization. (1998). *A health telematics policy in support of WHO's Health-for-All strategy for global health development: Report of the WHO Group Consultation on Health Telematics, 11–16 December, Geneva, 1997*. Geneva: World Health Organization, 39 p. [online]. [Accessed: 10 September 2026]. Available from: https://apps.who.int/iris/bitstream/handle/10665/63857/WHO_DGO_98.1.pdf?sequence=1&isAllowed=y

Wysmułek, I. (2019). Using public opinion surveys to evaluate corruption in Europe: Trends in the corruption items of 21 international survey projects, 1989–2017. *Quality & Quantity, 53*(5), 2589–2610. [online]. [Accessed: 22 February 2024]. Available from: https://link.springer.com/article/10.1007/s11135-019-00873-x

Xu, M., David, J. & Kim, S. (2018). The fourth industrial revolution: Opportunities and challenges, *International Journal of Financial Research, 9*(2), 90 – 95. [online]. [Accessed: 26 February 2024]. Available from: https://doi.org/10.5430/ijfr.v9n2p90

Yahya, N. (2018). Agricultural 4.0: Its Implementation Toward Future Sustainability. In *Green Urea. Green Energy and Technology*. *Springer*: Berlin/Heidelberg, Germany, 25–145.

Received: **May, 10, 2026**; *Approved*: **July, 05, 2026**; *Published*: **November, 2026**