

Digital Capitalism: A Primer

Matthew N. O. Sadiku¹, Uwakwe C. Chukwu², Abayomi Ajayi-Majebi³, Sarhan M. Musa¹

¹Roy G. Perry College of Engineering, Prairie View A&M University, Prairie View, TX, USA

²Department of Engineering Technology, South Carolina State University, Orangeburg, SC, USA

³Department of Manufacturing Engineering, Central State University, Wilberforce, OH, USA

ABSTRACT

Today, we are living in an age of massive transformation. Digitalization is changing the world. Digital capitalism refers to capitalism through the Internet. It has become an acceptable means of global economy. It has also become a way of life of everyone, promoting competition, efficiency, and different media. This cuts across traditional sectors, including healthcare, manufacturing, transportation, and telecommunications, and becoming essential to much of the economy today. This paper provides an overview of digital capitalism and its challenges.

KEYWORDS: *technology, digitalization, digital technology, digital capitalism*

How to cite this paper: Matthew N. O. Sadiku | Uwakwe C. Chukwu | Abayomi Ajayi-Majebi | Sarhan M. Musa "Digital Capitalism: A Primer" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-4, June 2022, pp.590-597, URL: www.ijtsrd.com/papers/ijtsrd50147.pdf



IJTSRD50147

Copyright © 2022 by author(s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



INTRODUCTION

Digital technology has refashioned our ways of communicating, working, consuming, and living. It is profoundly changing work and production processes. It has brought us autonomous systems, self-driving cars, Internet of things, social networking, mass surveillance, etc. It has also brought marked changes to communications, the production and distribution of goods, food production, medical treatment, and methods of warfare. The development of information and communication technology (ICT), with its related technologies such as the Internet, big data, cloud computing, artificial intelligence, 3D printing, smart phones, and robotics are differentiating the division of labor. They are also reshaping our production, creating the so-called "new economy." With the development of ICT, new changes have occurred in the relationship between online production and consumption on the Internet platform [1].

The concept of cyberspace or Internet was initially developed by government agencies, educational institutions, military contractors, etc. It has now come to be used primarily by corporate users. The digital is not "free" since it is always involved in capitalist

structures, institutions, and productions. Human societies potentially have superior capacities of coordination and innovation than other animal or cybernetic systems. Digital society has been lauded as freeing individuals from the constrictions of time and place. So digital society is capitalist society [2]. A modern society cannot maintain political freedom without a commitment to free-market capitalism.

Individuals in the networked society create networks that are interconnected through digital technology on the Internet, which is connected to other information resources. They must join the network if they want to stay connected with other parties and participate in the global economy. Both users and data providers are considered participants. Digital technology enables people to explore the world and gain information from the Internet.

TYPES OF CAPITALISM

As shown in Figure 1, capitalism is a mode of economic production, where humans sell their labor power to capitalists who own the means of production as private property with the goal of accumulating more capital [3]. It is a general societal realm shaped

by the logic of accumulation. Three decades of uneven capitalist development and neoliberal globalization have devastated the economies, societies, livelihoods, and lives of people around the world. For capitalism to function best, it must be free of government interference. The digital capitalism approach has been explored in a series of frameworks such as informational capitalism, advanced capitalism, finance capitalism, free-market capitalism, welfare capitalism, cybercapitalism, technocapitalism, virtual capitalism, surveillance capitalism, and platform capitalism. These types of capitalism have a few characteristics in common. No single theory that can elaborate the development of digital capitalism. We consider the following as examples [4-7].

- **Surveillance Capitalism:** This is practiced by a few corporations and exploits the almost unregulated cyberspace and the invasive forces of the Internet as sources of capital formation and profit maximization. It exploits the dependent and submissive users of platforms. The rapid accumulation of capital and the rapid institutionalization make surveillance capitalism the standard model of market capitalism.
- **Platform Capitalism:** The economy combined with digital information technologies has produced a capitalism platform, intended to ensure new economic growth and the vitality of classic industrial sectors. There are different types of platforms, namely advertising platforms (e.g. Facebook), cloud platforms (e.g. Amazon Web Services (AWS)), industrial platforms (e.g. Microsoft), product platforms (e.g. Spotify) and lean platforms (e.g. Uber). An analysis of digital capitalism should consider the monopolistic tendencies of these platforms.
- **Communicative Capitalism:** This concept conceptualizes the commonplace idea that the market is the site of democratic aspirations. For example, McDonald's, Walmar, and reality TV are depicted as popular because they seem to offer what people want. The notion of communicative capitalism tries to capture this strange merging of democracy and capitalism. It does so by highlighting the way networked communications bring the two together. Ideals of access, inclusion, discussion and participation come to be realized through expansions.
- **Constructive Capitalism:** This was developed by a new generation of revolutionaries attempting to build a better kind of capitalism from the ground up. Constructive capitalism is "better" in a tightly defined economic sense. It redefines the value equation at the heart of capitalism.

Constructive capitalists were shifting from value chain to value conversation, when resources are utilized by renewing them instead of by exploiting them. Resources are allocated democratically and respond better to demand and supply. Figure 2 illustrates constructive capitalism [8].

- **Digital Capitalism:** This is an extension of classic capitalism. It may appear to be an affective form of capitalism. The Internet is the backbone of all services within the network economy and the mega structure of the digital economy. The use of the Internet has shifted from aiding government agencies to serving private commercial interests. It is increasingly becoming the 21st century's leading trade route and determining new rules on "digital capitalism." The commercial Internet has introduced new forms of work and corporate cultures as part of digital capitalism. The collapse of classical capitalism at the end of the twentieth century has been averted by a new growth cycle due to digital technologies. Capitalism has always drawn on worldwide labors: the slave trade, super-exploited colonial workers, and peasantry of the periphery. It can survive the crises that periodically threaten to destroy it by generating new commodities. The rise of capitalist social media such as Facebook, Twitter, YouTube, and Instagram has shown new value of labor. Corporate social media are indication of the exploitation of new forms of surplus labor under capitalist conditions.

WHAT IS DIGITAL CAPITALISM?

The ideas of communism and socialism as propagated by great thinkers like Karl Marx, Mao, Friedrich Engels and others shaped thinking of the world. According to Marx, in the capitalist economy, the working class is "a machine for the production of surplus-value" and the capitalist class "a machine for the transformation of this surplus-value into surplus capital." Since the 1980s, Marxist theory has become unfashionable. Postmodernism challenged grand narratives, universalism, and the focus on the economy. It became a legitimating ideology of capitalism's flexible regime of accumulation. Henry Ford, the first car manufacturer, introduced one of the biggest means of promotion of capitalism. The most successful companies that undertake in the digital economy include Apple, Wikipedia, Google search, Facebook, and YouTube.

The concept of digital capitalism was introduced in the late 1990s to emphasize the role of digital technologies in global economy. Digital capitalism presents and engages with the theoretical approaches

of Karl Marx, Friedrich Engels, Georg Lukács, Theodor W. Adorno, Henri Lefebvre, and Dallas Smythe. It illuminates how a digital capitalist society's economy, politics, and culture work and interact. Digital capitalism has transformed our lives into a new commodity: personal data. Data is the most important commodity, the new oil. Data is used to profile and target people. Data is used to build stuff. Data is used to grow the value of assets. Data is treated as a form of capital. The focus on data should be seen as adding new sources of value and new tools of accumulation. The imperative to collect all data, from all sources, influences many key decisions about business models, political governance, and technological development [9].

Digital capitalism means that economic and social activity is centered on the exchange of digital information using data networks. It illuminates how a digital capitalist society's economy, politics, and culture work and interact. Commodities are the fundamental drivers of capitalism. Digital capitalism is in no way revolutionary. It remains capitalism, together with all the dynamics and discrepancies this involves. The fundamental capitalistic mechanisms still prevail in digital capitalism. These include as wage labor, profit, private ownership, and market. Features of digital capitalism include digital positivism, administrative big data analytics, digital culture industry, reified consciousness on the Internet, international division of digital labor, relations of capitalism, racism in the context of digital labor, digital alienation, social media, the relationship of imperialism and digital labor, trade unions and class struggles in the digital age, platform cooperatives, digital commons, and public service Internet platforms [10]. Figure 3 shows the pyramid of digital capitalism [11], while Figure 4 depicts variants of modern capitalism [12].

The main digital corporations have managed to position themselves as natural monopolies. These include Google, Apple, Facebook, Amazon and Microsoft. These companies are burning examples of digital capitalism. They are popularly known as GAFAM and are considered an Internet oligopoly. The big tech companies want more than a share of our economic activity. Consider Google as an example. It practically spans the globe and runs a global job-search machine. Its mail and storage systems are used by private and public institutions. The company is also behind the massive digitalization of books from public libraries and their software is installed by default in most of the cellphones that are sold today [13].

FEATURES OF DIGITAL CAPITALISM

The central features of digital capitalism are summarized as follows [4,12]:

1. Profit accumulation is endogenous to the means of production.
2. Data production often depends on user cooperation.
3. Revenues are driven by marketing data to advertisers and service providers and by charging users for subscriptions. This model relies on commodification and commercialization of user data.
4. Profits are optimized through monopolies by disrupting existing industries and intermediaries.
5. Capital does not accrue to users but is shared among entrepreneurs and early-stage investors.
6. Technologists are long-term investors and are fully cognizant of the effect compounding exponential returns has on wealth.
7. With this long-term value mindset, start-up investors willingly fund operating losses.
8. Information and communication technologies are produced, marketed, and exploited as central raw materials, resources, and commodities by transnational corporations.
9. The way in which the production, distribution, and consumption of information and communication technologies are institutionalized on the Internet has far-reaching consequences for societal development.
10. Digital capitalism is responsible for the continuing dominance and productivity of globalized market economic structures.
11. The world's leading tech companies are restructuring sluggish capitalism by efficiently and effectively processing knowledge, data, communications, and information.
12. The productivity of digital capitalism is based on the systematic commodification of new products, services, and human labor.
13. Commodification has expansive and invasive tendencies, especially in the context of deregulation and privatization.

APPLICATIONS OF DIGITAL CAPITALISM

Digital capitalism affects every aspect of the economy. The following are typical areas of its manifestation.

- **E-health:** This is a new medical diagnosis and intervention that is focused on the development of digital gadgets. E-health is an emerging field in the intersection of medical informatics, public health, and business, referring to health services

delivered by the Internet and related technologies [14].

- **Digital Advertising:** In the past, advertising and marketing are conducted through newspapers, television, radio, and magazines, all of which are traditional media tools. Today, digital advertising controls the largest share of global ad revenues. Consider Google for example. Google is a capitalist enterprise par excellence and a prime example of a digital firm. Early on in their business, Google started using advertisements to fund their search engine. Google generates revenue when users click on advertisements. Its modes of advertising represent a change from traditional twentieth-century advertising which operates within a much larger and more general shift away from twentieth-century modes of capitalism. The majority of Google's revenue comes from the advertising through its search [15].
- **Global Manufacturing:** Digital capitalism encourage multiple major manufacturers producing for the world market. The consequence is that global manufacturing leads to overcapacity and overproduction that put downward pressure on the prices of manufactured goods.
- **Online Dating Sites:** These address the need for emotional and sexual intimacy. Dating sites are more about profiling users and training algorithms than about actually helping people to satisfy their emotional and sexual needs.
- **Education:** Digitalization is the process by which what we think, say, and do becomes mediated by digital technologies. When it comes to education, we have seen failed promises about the transformative effects of technology. Basic competences that are elementary for educational and learning processes, such as the ability to reflect and criticise, educational and learning theory basics, and media pedagogical competences are increasingly marginalized. Concepts of "media education" and a broad understanding of "media literacy" play virtually no role in economy-related documents and strategies. Technology companies like Apple have been particularly skillful in targeting the education market with a form of "cyber-utopianism" [16].

BENEFITS

Decent work for decent pay secures peoples' livelihood, reduces inequality, fosters gender equality and strengthens communities. Digital socialist humanism is the alternative to digital capitalism. It is

a democratic socialist society where digital technologies benefit the many and help creating wealth, participation, recognition, and voice for all. Today' capitalism no longer needs to motivate its subjects ethically, but educates and selects through a process of economic survival of the fittest.

Among all modes of production, capitalism is unique; it is immensely successful raising productivity levels as well as living standards. Capitalism demands constant technological change in order to cut costs, beat competitors, control workers, and gain market share [17].

CHALLENGES

A small number of capitalists, managers, governors, and celebrities, and influencers accumulates power whereby workers, citizens, and other people are disempowered.

The negative impact of digital capitalism needs be checked to prevent cross-border criminal activities like terrorism. The power of digital capitalism should also be counteracted, such as demanding digital policies that protect the rights of users and citizens. In digital capitalism, questions about privacy rights, human rights, and consumer rights are questions about the rights of digital workers. Capitalists want to maximize profits, but they rarely know how to go about it, especially when they operate radically innovative sectors.

Digital capitalism lacks direct physical connections to tangible commodity values. Digital capitalism privileges the generation of value via immaterial exchange where there is only the transaction cost of the fiat currency itself. Monopoly is the natural aspiration of digital ventures. Digital technologies have significantly amplified capital's ability to intervene in social life [18].

Other challenges include the following [19].

- **Privacy:** There is a major complaint that digital giants do not have a strong privacy mechanism in place. Privacy issues have been mostly expressed about social media like Facebook, You Tube, Twitter, etc.
- **Digital Divide:** The digital divide still involves 3.5 billion people with no access to an Internet connection. It is apparently becoming increasingly difficult to establish networks in underdeveloped nations and provide the digital infrastructure required. There are numerous other "digital divides" in terms of age, income, gender, region, urban/rural community, quality, and affordability.

➤ **Technological Impact:** Technology has been on a reputational roller coaster in recent years. Some people see the technological developments as an inherent necessity, which there is no point in opposing and which cannot be controlled. Today's technologies might also cause further problematic distribution effects. The issues of technology and equality are closely interwoven. Technology is not good or bad, it simply offers opportunities. Some experts believe that the new technological advances will destroy jobs on an immense scale. As illustrated in Figure 5, the winner takes it all in digital capitalism [20].

➤ **Economic Alienation:** In digital capitalism's economy, we find monopoly corporations such as Google, Apple, Facebook, Amazon, or Microsoft that control digital services such as search engines, phones, social networks, online shopping, or operating systems. In an alienated economy, there is a state monopoly of the means of communication that is used for disseminating ideological knowledge and political opposition, while opponents' voices are stifled, repressed, or eliminated. Ideologues use strategies such as acceleration, brevity, dissimulation, distortion, lies, manipulation, personalisation, scandalisation, scapegoating, superficiality, etc.

CONCLUSION

Digitalization has changed the rules of competition and the distribution of added value. Digital capitalism is a new configuration of the historical dynamics of production, labor, and consumption that results in a new variant of historical capitalism. It is an aspect of contemporary society where digital technologies such as the computer, the Internet, the mobile phone, tablets, robots, and smart technologies mediate the accumulation of capital, influence, and reputation. It is becoming hegemonic: cities are to become smart, businesses must be disruptive, workers are to become flexible, and governments must be lean.

Educational institutions need to equip their students with the 21st century skills needed for today's labor market. More information about digital capitalism can be found in the books in [21-37].

REFERENCES

- [1] X. Wei, "Value production, measurement, and distribution under digital capitalism: A critique of the theory that the law of value has failed," *World Review of Political Economy*, vol. 12, no. 4, March 2020, pp. 472-492.
- [2] M. Grimshaw, "Digital society and capitalism," *Palgrave Commun*, vol. 3, 2017.

- [3] "Capitalism and reproduction," May 2022, <https://www.newframe.com/capitalism-and-reproduction/>
- [4] W. A. Meier, "Towards a policy for digital capitalism?" (chapter 6) <https://www.diva-portal.org/smash/get/diva2:1535728/FULLTEXT01.pdf>
- [5] Y. Mahatma and Irwansyah, "Digital capitalism: Logic of capitalism practice in the context of communication technology in Industry 4.0," *Advances in Social Science, Education and Humanities Research*, vol. 558, 2021, pp. 241-248.
- [6] C. Fuchs, "Towards a critical theory of communication as renewal and update of Marxist humanism in the age of digital capitalism," *Journal for the Theory of Social Behaviour*, vol. 50, 2020, pp. 335-356.
- [7] J. Dean, "The foreclosure of politics," *Cultural Politics*, vol. 1, no. 1, 2005, pp. 51-74.
- [8] S. S. A. Kazmi et al., "The New Capitalist Manifesto: Building a Disruptively better Business," *International Journal of Academic Research in Business and Social Sciences*, vol. 6, no. 10, 2016, pp. 19-29.
- [9] J. Sadowski, "When data is capital: Datafication, accumulation, and extraction," *Big Data & Society*, January-June, 2019, pp. 1-12.
- [10] "Chapter One: Introduction: What is digital capitalism?" Unknown Source.
- [11] "iFunny," <https://ifunny.co/picture/we-rule-you-we-fool-you-we-shoor-wear-for-LrAQLxTr8>
- [12] S. Canderle, "Modern variants of capitalism, Part 3: Digital capitalism," <https://blogs.cfainstitute.org/investor/2021/12/09/modern-variants-of-capitalism-part-3-digital-capitalism/>
- [13] "Digital capitalism: Meaning, concepts, dimensions and issues," February 2018, <https://www.gktoday.in/topic/digital-capitalism-meaning-concepts-dimensions-and-issues/>
- [14] M. Cometta, "Digital capitalism and the e-health revolution," https://redib.org/Record/oai_articulo3239341-digital-capitalism-e-health-revolution
- [15] R. Graham, "Google and advertising: Digital capitalism in the context of post-Fordism, the reification of language, and the rise of fake news," December 2017,

- <https://www.nature.com/articles/s41599-017-0021-4> [27] A. J. Means, *Learning to Save the Future: Rethinking Education and Work in an Era of Digital Capitalism*. Routledge, 2018.
- [16] D. Buckingham, "Epilogue: Rethinking digital literacy: Media education in the age of digital capitalism," *Digital Education Review*, no. 37, June 2020. [28] M. Betancourt, *The Critique of Digital Capitalism: An Analysis of the Political Economy of Digital Culture and Technology: An Analysis of the Political Economy of Digital Culture and Technology*. Brooklyn, NY: Punctum Books, 2016.
- [17] N. Srnicek, "Platform capitalism," December 2016, <https://www.wiley.com/en-us/Platform+Capitalism-p-9781509504862> [29] N. Gardels and N. Berggruen, *Renovating Democracy: Governing in the Age of Globalization and Digital Capitalism*. University of California Press, 2019.
- [18] J. de Rivera "A guide to understanding and combatting digital capitalism," <https://www.triple-c.at/index.php/tripleC/article/view/1173> [30] B. Little and A. Winch, *The New Patriarchs of Digital Capitalism: Celebrity Tech Founders and Networks of Power*. Routledge, 2021.
- [19] "The digital capitalism debate," March 2019, <https://progressive-alliance.info/2019/03/24/digital-capitalism-debate/> [31] L. Panitch and G. Albo (eds.), *Beyond Digital Capitalism: New Ways of Living: Socialist Register 2021*. NYU Press, 2020.
- [20] "Digital capitalism produces few winner,," <https://www.japantimes.co.jp/life/2013/02/20/digital/digital-capitalism-produces-few-winners/> [32] S. Pfeiffer, *Digital Capitalism and Distributive Forces*. Transcript Verlag, 2022.
- [21] C. Fuchs, *Rereading Marx in the Age of Digital Capitalism*. Pluto Press, 2019. [33] C. Fuchs, *Communicating COVID-19: Everyday Life, Digital Capitalism, and Conspiracy Theories In Pandemic Times*. Emerald Group Publishing, 2021.
- [22] C. Fuchs and V. Mosco, *Marx in the Age of Digital Capitalism*. Brill, 2015. [34] C. Fuchs, *Digital Capitalism: Media, Communication and Society*. Routledge, 2022.
- [23] D. Schiller, *Digital capitalism: Networking the Global Market System*. MIT Press, 1999. [35] D. Elder-Vass, 6 - *Digital monopoly capitalism: Apple from Part III - Digital Economies*. Cambridge University Press, 2016.
- [24] J. Sadowski, *Too smart: How Digital Capitalism is Extracting Data, Controlling Our Lives, and Taking Over The World*. MIT Press, 2020. [36] W. A. Meier, *Towards a policy for digital capitalism?* Gothenburg: Nordicom, University of Gothenburg, 2019
- [25] M. Zukerfeld, *Knowledge in the Age of Digital Capitalism*. University of Westminster Press, 2017. [37] J. Huberman, *The Spirit of Digital Capitalism*. John Wiley & Sons, 2022.
- [26] V. Barassi, *Activism on the Web: Everyday Struggles Against Digital Capitalism*. Routledge, 2015.



Figure 1 Capitalism and reproduction [3]

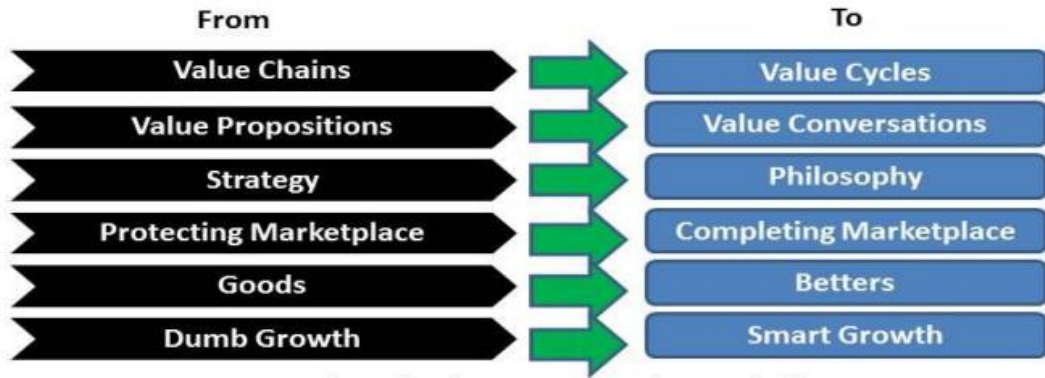


Figure 2 Constructive capitalism [8].



Figure 3 The pyramid of digital capitalism [11]

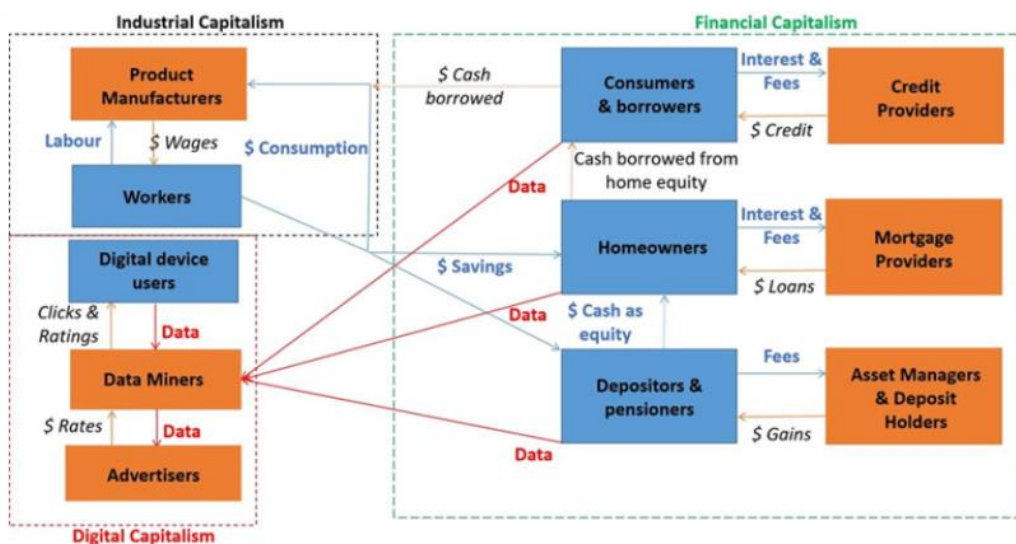


Figure 4 Variants of modern capitalism [12].



Figure 5 Workers at Amazon logistic center in Germany see little of the profits made by the online retailing giant [20].

