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Digitalisation and the Varieties of Capitalism in Central and Eastern Europe The Case of Poland¹

Abstract: This article aims to juxtapose the conclusions from the debates on the varieties of capitalism in Poland, in particular dependent market economy and patchwork capitalism, with the discussion on the evolution of digital platforms and, more broadly, the digitalisation of Polish society and economy. The development of the institutional architecture of the economy in the context of digitalisation in Poland since the late 1980s is reconstructed, considering three major phases in the country's history. These are respectively: (1) the period of economic and political transformation of the post-socialist system until Poland's accession to the EU; (2) the phase of the global economic crisis caused by the financial crisis in 2008; (3) the period of polycrisis, starting from 2015, including the pandemic crisis and lasting until 2023 (the post-Covid-19 pandemic era). Based on the examination of the Polish case, we conclude that the growing dependence of the state on big tech transnational companies which provide critical infrastructure for key public services might present a danger to the digital sovereignty of the country.

Key words: digitalisation, capitalism, Central and Eastern Europe, Poland, digital platforms

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Introduction

In the article, we present the preliminary results of the analysis of the relationships between the emergent variety of capitalism in Poland as the Central and Eastern European (CEE) largest economy and the advances of digitalisation accompanied by the expansion of global Internet-based platforms. Poland was regarded as the frontrunner of capitalist and democratic reforms in the early 1990s compared to the other countries of the former post-socialist bloc (Cianetti et al., 2018, p. 245). Together with other Visegrad countries (Czechia, Slovakia and Hungary) and Slovenia, it maintained a greater part of its complex manufacturing in the 1990s and experienced reindustrialization since the early 2000s as a result of the inflow of FDI (Bohle & Greskovits, 2012, p. 47). Following Poland's accession to the EU in 2004 and the global financial crisis, the country made its labour market even more flexible and aimed at attracting high-tech FDIs, including infrastructural platforms. However, it also experienced an illiberal swerve in 2015. The right-wing conservative party, Law and Justice (Prawo i Sprawiedliwość, PiS) came to power under the banner of reinforcing Poland's position in the European Union (EU), with a strong emphasis on technological development. Yet, as far as the core indicators of digitalisation presented in the secondary data in the paper are concerned, the country's position remains stagnant with limited progress observed only in some areas and regressing in others.

In the present article, we ask how the digitalisation of economy and society is related to the political and economic developments in Poland in the years 1989—2023, including the emergence of a peculiar type of “patchwork capitalism” (Rapacki [ed.], 2019; Gardawski & Rapacki, 2023), “dependent market economy” (Nölke & Vliegenthart, 2009) and other types of political-economic regimes discussed in the literature (Bohle & Greskovits, 2012; Jasiński, 2013; Muszyński, 2019). We reconstruct some of the features of the political-economic regime and their evolution as digital platforms and more broadly — digitalisation — unfolds.

The following article is based on a critical review of the existing analyses of the varieties of capitalism in CEE (with particular attention paid to the developments in Poland) juxtaposed with the available secondary data on digitalisation. In the analysis, we used secondary data such as databases of public statistics (Polish Statistics, Eurostat) showing basic indicators of the extent of digitisation of Polish society and economy. We also use reports published by government bodies (e.g., ministries) on policies and strategies formulated by consecutive Polish governments for the development of the economy and the country in the analysed context, as well as the literature on the subject. We performed a systematic literature review (Snyder, 2019) based on the collected publications.

We argue that Polish capitalism, despite its patchwork characteristics such as institutional heterogeneity, resembles the features of dependent market economy (DME), but it has a new dimension that can be tentatively described as DME 2.0. The new type of dependency is rooted in access to data and critical state infra-

structure (e.g., public services, cybersecurity) mediated by Big Tech giants but not only in a regional territorial scope (semi-peripheral economies in CEE) but also in a global range. Hence, countries such as Poland, as well as semi-core and advanced Western economies, represent an area for socio-economic experimentation and political dependence on private investment and the jurisdiction of global capital.

The paper consists of three parts. In the first part, we present the post-socialist economic and political development of Polish capitalism between 1989 and 2007 toward the digitalisation of economy and society. In the second part, we focus on the consequences of the Global Financial Crisis (2008—2015) for Poland's development toward digitalisation. In the last part of the text, we show the changes in digitalisation caused by the illiberal swerve of Poland in 2015 as well as the COVID-19 pandemic in 2020, and the subsequent economic crisis until 2023. The article ends with conclusions.

Post-Socialist Economic and Political Development

One of the most significant outcomes of the system change in Poland is the expansion of neoliberalism and the rise of a liberal market economy. The country experienced the so-called “shock therapy” aimed at a rapid transition from a centrally planned economy to a liberal market economy (Hall & Soskice, 2001) if one uses the typology derived from the school of “varieties of capitalism.” The reforms included in the plan of Leszek Balcerowicz, the Minister of Finances in the first democratic government, entailed the goals of macroeconomic stabilization, micro-economic liberalization, as well as deep institutional reforms (Balcerowicz, 1998). The assumption was that the creation of institutions typical of the free-market economies of the West would create circumstances conducive to the development of new market actors, entrepreneurial individuals able to compete in a liberalized market and able to create and manage private enterprises (Eyal et al., 2001). Highly qualified, competent, and educated employees were seen as necessary preconditions for competitiveness and integration of CEE economies into networks of new international business relations.

The other important feature of the CEE political economy was a strong capital dependency from the Western countries. The chronic scarcity of capital after the end of state socialism (Eyal et al., 2001) resulting from the high indebtedness of CEE countries, bankruptcies of state-owned firms and rapid decapitalization of state-owned infrastructure, created pressure on the governments to compete for foreign direct investments (FDIs) through offering cheap and well-educated workforce, flexibilizing labour market and granting tax exemptions in special economic zones that began to be created since 1995. The reforms conducted in the late 1990s were also conditioned by the preparation of Poland to join the EU. As noted by Bohle and Greskovits (2012, p. 87), “further convergence on the EU requirements

has entailed a rush for monetary and exchange rate stability, fiscal discipline, and welfare state retrenchment.”

Nölke and Vliegenthart (2009, p. 677) called Poland and other CEE countries “dependent market economies” (DME) to denote their economic dependence on capital flows via FDI. According to them, the comparative advantages of DME “are based on institutional complementarities between skilled, but cheap, labour; the transfer of technological innovations within transnational enterprises; and the provision of capital via foreign direct investment (FDI)” (Nölke & Vliegenthart, 2009, p. 672). The research and development (R&D) activities are kept at the minimum level given the role of DMEs as “assembly platforms based on innovations that are made at TNC headquarters and transferred within TNC hierarchies” (Nölke & Vliegenthart, 2009, p. 678).

The concept of DME is a useful tool for understanding the role of TNCs and international institutions in shaping the political and economic trajectories of the CEE countries. Yet, it might overestimate the institutional coherence of the resultant order. The attempts to simultaneously imitate various, often contradictory political-economic models resulted in the emergence of a hybrid order without an overarching systemic logic. A claim on hybridization as the main feature of CEE capitalism was repetitively made in the existing literature (e.g., Bohle & Greskovits, 2012; Jasiecki, 2013; Lane & Myant, 2007). It was given the most coherent formulation in the idea of “patchwork capitalism” (Rapacki [ed.], 2019; Gardawski & Rapacki, 2023). Differently from “variety of capitalism” theory (Hall & Soskice, 2001) and DME concept (Nölke & Vliegenthart, 2009), which both assume that economic systems enjoy their comparative advantages thanks to complementarities among their parts, the “patchwork” is seen as a specific type of institutional order present in the CEE, whose core feature is an incoherence of the institutional architectures (Gardawski & Rapacki, 2023; Rapacki, 2019). It combines elements such as “(1) proto-capitalist legacy, (2) socialist legacy, and (3) imprints of diverse models of contemporary Western-type capitalism, with a predominant role of the last layer.” (Rapacki & Czerniak, 2019, p. 200). The major features of the ideal type (in Max Weber’s sense of the term) of “patchwork” order include:

- (i) the weakness of basic institutions making up their socio-economic order, including the state and the law [...]; (ii) the absence of a dominant form of capital able to impose its own “fabric”² preferences [...]; (iii) the resultant absence of a dominant economic class (e.g., the national bourgeoisie) interested in the existence of a particular “fabric” [...]; and (iv) the lack of well-internalized — or deeply socially embedded — cultural values supporting the “fabric.” (Gardawski & Rapacki, 2023, p. 8)

² By “fabric” the authors mean fundamental, institutional rules of the game (Gardawski & Rapacki, 2023, p. 8).

From this perspective the entry of GAFAM³ to CEE in general and Poland in particular, the important consequence of the patchwork order created in the 1990s was its relative openness to external pressure and influences. As Gardawski and Rapacki (2023, p. 8) suggest: “Due to low institutional barriers to entry, any new organizations and institutions can join it relatively easily, imposing their logics on the host institutional architectures — exactly the way a patchwork blanket is made through stitching divergent new patches.” Therefore, we could also expect that GAFAM and international platforms more broadly would be able to enter and shape the Polish economy more freely than in some better-regulated and institutionally less permeable political-economic systems in the West. The feature of the patchwork order makes some aspects of its functioning close to the ideal type of the dependent market economy except for the co-existence of foreign capital dependency with other institutional “threads” (understood as “organizations and secondary institutions (players)” (Gardawski & Rapacki, 2023).

The system transformation in the 1990s had important implications for technological changes, including the nascent forms of digitalisation. According to Hardy (2009), Poland has undergone a profound restructuring in terms of technology. Firstly, the opening to the global economy and the abolition of the Council for Mutual Economic Assistance (RWPG) in 1991, under which the defence industry within the Soviet bloc was the market for relatively advanced technologies, had a severe impact on local technology-intensive companies. Secondly, it was not modern technology and R&D but rather low labour costs which were a source of comparative advantage for the Polish economy (Jasiecki, 2013, p. 370; Muszyński, 2019, p. 81). This was reflected in the budgetary spending on R&D in Poland. Before the EU accession, they amounted to 0.56% of the GDP (in 2002). It was much lower not only as compared to Western economies but even to other Visegrad countries, such as Czechia (1.15%) and Hungary (1%). This situation persisted also in the first years after the EU expansion (cf. Jasiecki, 2013, p. 364). The weaknesses of the Polish R&D investments were magnified by the lack of complementarity between the research and its implementation in production, low competitiveness and innovativeness of enterprises, low growth of high-tech SMEs, low level of information exchange and technology transfer between the public and private sectors (Bąkowski & Mażewska, 2015).

The entry of the first platforms into Poland in the early 1990s was not coincidental. Relatively low labour costs and the presence of highly skilled specialists combined with low entry costs for foreign companies led to the formation of a fertile ground for Big Tech enterprises. Microsoft opened its office in Warsaw in 1992. Next, the innovation centres in Łódź, Wrocław and Poznań were opened. They offered services such as research, software development, sales, and support.⁴ In 2003, the chief of the Internal Security Agency and the CEO of the Polish branch

³ GAFAM is a word composed of an abbreviation of the first letters of the Silicon Valley companies: Google/Alphabet, Amazon, Facebook/Meta, Apple, and Microsoft.

⁴ <http://web.archive.org/web/20070101033506/http://www.microsoft.com/poland/historia/default.mspx>. Retrieved 28.06.2023.

of Microsoft signed an agreement defining the rules of the participation of Poland in the Government Security Programme. Since then, Microsoft has become the main provider of IT solutions for public administration in Poland even though it was not (at least officially) a part of the agreement.

The first Google office and R&D centre appeared in Poland in 2005 in Warsaw. The platform offers services such as advertising, sales support, and engineering. Currently, there are also offices and innovation centres in Wrocław and Kraków.⁵ The regional office of Facebook in Warsaw opened much later, in 2012, mostly dealing with advertisement sales; Amazon ran its first distribution centres in 2014; no official Apple office exists in Poland except for ISpots and resellers.⁶ The chronology makes it clear that the GAFAM expansion occurred mainly after the EU expansion.

As the infrastructure and education of Polish citizens in terms of digital (ICT and Internet) literacy also improved in the 2000s, an additional set of supportive factors for the expansion of technological platform companies was created. Based on the secondary data (GUS, 2007; Eurostat, 2022) we conclude that in the 2002–2007 period, the access to the Internet and computers in Polish households was increasing, and the use of Internet and computers became more frequent in the 2000s. Notably, however, the average percentage of Internet access as well as computer availability in households in Poland was lower than the average in the EU countries during the entire period of the 2000s and started to converge only in the 2010s. In 2007, 41% of Polish households had access to the Internet (as compared to 54.8% in the EU) and 53.7% had access to computers (as compared to 64.3% in the EU) (Eurostat, 2022). Similar trends and differences can be observed in the case of the computer and Internet skills of Poles.

The 2008 Global Financial Crisis and Beyond

Becoming a new member of the EU, Poland has maintained its semi-core position as a country where production is based on technologies that have been imported from outside (King & Szelenyi, 2005; Bohle & Greskovits, 2007; Lane & Myant, 2007; Drahokoupil, 2008). It was observed that transnational companies (TNCs) hardly provided local partners with the latest technologies and did not themselves try to create systemic conditions conducive to innovation (Jasiecki, 2013, p. 363). Overcoming the developmental distance between Poland and the “old” EU countries was defined as one of the policy targets in “National Development Strategy

⁵ <https://www.firma.egospodarka.pl/21380,Centrum-innowacji-Google-we-Wroclawiu,1,11,1.html>, (accessed: 28.06.2023), <https://www.internetstandard.pl/news/Google-otwieramy-polski-oddzial-w-Warszawie,83336.html>; https://biznes.lovekrakow.pl/aktualnosci/google-wrocl-do-krakowa-nowe-biuro-otwarto-przy-rynku-glownym-zdjecia_48850.html. Retrieved 28.06.2023.

⁶ See details in the next sections.

2007—2015” prepared by the right-wing coalition led by the conservative Law and Justice (PiS) (in power between 2005 and 2007): “Poland must have a modern development policy that will allow it to narrow the development gap with richer EU countries. This policy should take advantage of those features of the Polish economy and Polish society that can be a source of our country’s comparative advantage [...]” (Ministerstwo Rozwoju Regionalnego, 2006, p. 2). The EU enlargement further increased interstate competition for foreign capital. The “bidding wars” (Bohle & Greskovits, 2012, p. 168) involved decreasing corporate income taxes, investing in infrastructure used by TNCs, creating special economic zones and reforming labour markets to enable (or tolerate) highly flexible employment.

Contrary to the EU trend, the Polish economy has been moderately affected by the effects of the global financial crisis in 2007—2009. GDP growth slowed down, but there was no recession. Unemployment grew in 2008—2013, but its rise was less pronounced than in neighbouring countries (Maciejewska et al., 2016, p. 229). It was accounted for by various factors, including a relatively high level of government spending, the inflow of EU funds, low personal debts and a well-regulated banking sector (Maciejewska et al., 2016; Rae, 2013). However, the image of the “green island,” free from the crisis, which was promoted in the late 2000s by the centrist liberal government of the Civic Platform (PO) and the Polish People’s Party (PSL) (in power between 2007 and 2015), obscured several problems which were magnified by the indirect and direct consequences of the global financial crisis. Firstly, the buffer of the crisis on the labour market was constituted by short-term, precarious employment, whose share among young workers further increased after 2010. Secondly, the fear of the crisis became the justification for certain austerity measures, such as freezing wages in the civil service and public administration and increasing VAT, introducing changes to the Labour Code to enable more flexible employment (temporary between 2009 and 2011) and working time regulations (permanently) and increasing the retirement age for women and men to 67. Some of these changes, including pension reform, directly reflected the recommendations of the European Commission (Czazasty & Mrozowski, 2022).

In the wake of the crisis, the government attempted to promote policies aimed at technological upgrading and digitalisation, but their implementation was slowed down due to austerity measures, rising social conflicts and the need to focus on short-term anti-crisis measures. An example of a longer-term vision is the study “Poland 2030” — a document issued in 2009 by the PO/PSL government led by Donald Tusk, containing a plan for the country’s social and economic development for the next 20 years (Boni, 2009). Firstly, the government assumed the need to accelerate and facilitate digitalisation, including the implementation of full coverage of broadband Internet services throughout the country with good quality corresponding to EU standards. Secondly, it was presumed that the penetration of ICT infrastructure enabling data transmission would be at a level that meets global technological standards by 2030 (Boni, 2009, p. 381).

Similar recommendations follow from the “Strategy for the Development of the Information Society in Poland 2007—2013” published by Tusk’s government

in 2008. The main intention contained in this document was the claim that “the rapid increase in the importance of information and services provided electronically and thus the use of information and communication technologies in the economy, public administration (central and local government), as well as in the everyday life of citizens is associated with a new trend of civilization transformation — transformation towards an ‘information society’” (Ministerstwo Spraw Wewnętrznych i Administracji, 2008, p. 2).

Overall, governments’ plans and promises should be set against the indicators of digitalisation in Poland in 2008—2014. The data (GUS, 2014, 2015; Eurostat, 2022) demonstrates that most of them indeed improved. In the 2010s, the percentage of households with computers and Internet access has been steadily increasing similarly to the frequency of computer and Internet use by Poles. In 2015, 77.9% of the households in Poland enjoyed Internet access (82% in the EU-28) and 75.8% had access to a computer (82.6% in the EU-28). The level of computer and Internet skills also improved. An uneven growth in the share of individuals using government services via the Internet was observed. Although the percentage was initially increasing, it fell considerably in 2013. Overall, Poland still lagged behind the EU average. In 2015, the share of individuals using government services via the Internet was 39.7% in the EU-28 while for Poland it was only 19% (Eurostat, 2022).

Nevertheless, the conditions described above may have to some extent prompted some of GAFAM and so-called labour platforms (mediating between workers or service providers and users via online applications, e.g., Srnicek, 2016) to invest in Poland. As already mentioned, the Polish government adopted strategies to encourage the location of big tech investments in Poland in order to: (1) enable the development of the domestic ICT industry, (2) catch up to Western EU countries in terms of economic and social development, and (3) enable GDP growth. An emblematic example was Amazon which started its operations in 2014, but its main development occurred after 2015.⁷ The company was welcome as a “milestone in the Polish economy” by the Minister of Economy, Janusz Piechociński, despite offering the Polish workers one-fourth of the German worker’s salary in 2015.⁸ Amazon was able to count on numerous concessions from the PO/PSL government, including the ability to locate its logistics centres in special economic zones, where tax exemptions and public infrastructure were guaranteed. As already noted, the Polish branch of Facebook was established in 2012 in Warsaw. It was responsible for managing the CEE area, servicing entrepreneurs, supporting, and assisting with marketing activities.⁹

Another significant development in the period following the global financial crisis was the entry of Uber into Poland — a company that has become an epitome of the “gig economy” understood as the segment of the labour market in which short-term, often precarious jobs are prevalent. The platform was registered in

⁷ <https://www.aboutamazon.pl/wiadomosci/amazon-w-polsce>. Retrieved 28.06.2023.

⁸ <https://www.dw.com/pl/die-welt-w-polskim-amazonie-panuj%C4%85-surowe-obyczae/a-18593065>. Retrieved 21.12.2023.

⁹ https://brief.pl/nowa_siedziba_facebooka_w_polsce/. Retrieved 28.06.2023.

December 2013 and in mid-2014 it began providing its services in Warsaw and then in other large Polish cities.¹⁰ Other logistic platforms followed soon after, in areas such as passenger transport, parcel delivery, and hotel services, but also in creative industries. Hotel services became increasingly platform-mediated too. Booking.com opened its first office in Poland as early as 2007. Airbnb started its operations in Poland in 2012 in the six largest Polish cities, bringing together about 70% of the accommodations available across the platform (Kowalczyk-Anioł & Pawłusiński, 2018, pp. 17—18).

Growing access to the Internet combined with relatively low costs and barriers to entry into the Polish market made Internet and platform-mediated activities, such as couchsurfing, carpooling etc., increasingly popular in Poland. The research carried out in the early 2010s showed that most of the respondents used Internet platforms to sell and/or buy goods (for instance, the Polish Internet trading platform Allegro was used by 95% of respondents, eBay.com by 30%), as well as use services such as carpooling (used by 12% respondents) and Couchsurfing (6%) (Wardak & Zalega, 2013, p. 21). Similar conclusions follow from a study by Kaminska (2017, p. 175), which states that “collaborative consumption will continue to develop [in the future], especially in the areas of carpooling and sharing and exchanging objects.”

Era of Polycrisis, Post-2015, Post-COVID

The final section of the paper concerns the era of polycrisis understood as the situation in which multiple crises start to interact and reinforce each other, often generating unforeseen consequences (Zeitlin et al., 2019). In Poland, the global and regional crises, such as the Covid-19 pandemic in 2020, Russia’s full-scale attack on Ukraine in 2022 and unfolding climate and energy crises, overlapped with the protracted political crisis of liberal democracy after 2015. The parliamentary and presidential elections in 2015 and the victory of the Law and Justice were sometimes interpreted in terms of an illiberal swerve (Bustikova & Guasti, 2017), democratic backsliding (Cianetti et al., 2018; Stanley, 2019) or the rise of new authoritarianism (Lendvai-Bainton & Szelewa, 2021). Between 2015 and 2023, PiS pursued a series of antiliberal reforms which it justified by representing the “true” national interests and strong citizens’ support it obtained in democratic elections in 2015 and 2019. As some of the reforms aimed at the greater subordination of the judicial system to the Ministry of Justice and the Parliament, they were interpreted as threatening the democratic principal separation of powers which led to the protracted dispute between the Polish government and the EC. Bluhm and Varga (2019) call the new system “conservative developmental statism” which combines

¹⁰ <https://www.forbes.pl/technologie/uber-rekrutuje-w-polsce-wkrotce-start/ctwyf7m>. Retrieved 14.07.2023.

economic nationalism and conservatism. Bohle et al. (2022, p. 664) make use of the notion of “authoritarian capitalism” to denote the political-economic order in which the autonomy of both state institutions and “(collective) market actors and individuals is undermined and subjugated to the particularistic interests of the ruling elites.” They describe its Polish variety as “conservative developmentalism” which represents an alternative to neoliberalism strategy of “catching up” with the West involving “financial independence, industrial policies and reconfiguration of the welfare state” in the sphere of production and “conservative reordering of social reproduction” based on suppression of women’s rights and their subordination to traditional gender roles (Bohle, et al., 2022, pp. 664—665). Krzysztof Jasiecki (2018) labelled the strategy as “conservative modernisation” as opposed to “modernisation by Europeanisation” proposed by the liberal camp of Civic Platform.

The Covid-19 pandemic crisis strengthened authoritarian trends present in the CEE region in general and Poland in particular in the pre-pandemic period (Bohle et al., 2022; Guasti & Bustikova, 2022). It also opened an opportunity for illiberal states to increase their executive power and support their allies, including state-dependent industries, as the EU rules on the limits of public spending were temporarily relaxed and extraordinary loans and EU grants for member states were offered (Bohle, et al., 2022). However, the crisis also revealed the continuity between liberal and illiberal governments in some areas of social life.

Applying the notion of patchwork capitalism to the analysis of CEE industrial relations, Gardawski and Towalski (2019, p. 94) place Poland in the cluster of “statist” countries. Their most important features are weak industrial democracy and the central role of the state which “with its administrative apparatus, consistently (which does not always mean ‘effectively’) fulfils its tasks resulting from ‘exercising power.’ In turn, social partners increasingly take the attitude of a ‘petitioner’ demanding their rights to become a stakeholder of the policymaking process.” The pandemic and subsequent crises (including the refugee crisis and the costs of living crisis as a result of very high inflation in 2022—23) only increased the tendency of state unilateralism in industrial relations justified by extraordinary circumstances.

The PiS political project of reinforcing the position of Poland in the EU and global division of labour also involved the goals of digitalisation, investments in Polish high-tech companies and the international expansion of Polish companies. For this end, several actions were undertaken. In 2016, the Ministry of Digitalisation was established. It issued the framework document “Strategic Action Directions of the Minister of Digitalisation in Computerisation of public services”¹¹ which provided detailed guidelines for actions such as implementing an electronic system for serving citizens and providing services along the lines of the systems in place in the UK and the US for, for instance, citizen identification ensuring digital security online and secure access to e-government.

¹¹ <https://www.gov.pl/web/cyfryzacja/kierunki-dzialan-strategicznych-ministra-cyfryzacji-w-obszarze-informatyzacji-uslug-publicznych>. Retrieved 12.07.2023.

At the beginning of 2016, the Prime Minister of the PiS government — Beata Szydło — announced the creation of the Plan for Responsible Development of the Polish economy (so-called “Morawiecki’s Plan,” named after the deputy PM and then-Minister of Development in PiS government — Mateusz Morawiecki).¹² Its main tenets were to support the development of companies and their productivity as well as expansion to foreign markets and sustainable development of the country. The implementation of this plan was to help the country get out of developmental traps. The research conducted in Poland also detected similar risks and weaknesses (cf. Pieriegud, 2016, p. 32; Śledziewska & Włoch, 2020, pp. 211—246).

“Morawiecki’s Plan” included five pillars of the country’s development until 2030, that is: (1) reindustrialization, (2) development of innovative companies, (3) capital for development, (4) foreign expansion, (5) social and regional development. Each pillar included proposals for specific solutions, such as the support of the SME sector in investments, infrastructure, exports and innovation, or the package for entrepreneurs and innovation. It intended to develop sectoral programs, assuming a situation where Polish companies would be competitive in all sectors and based on modern technologies. After the reconstruction within the PiS government in 2017, which resulted in replacing Beata Szydło for Mateusz Morawiecki in the role of PM, the Plan changed. The main objectives of the new “Morawiecki’s Plan” included an increase in investment, R&D, the number of medium-sized and large enterprises, and in establishing more Polish FDI.

The Covid-19 pandemic caused major acceleration trends of digitalisation processes in several areas (e.g., remote work, e-commerce, cloud services), transferring to online technologies the judicial system, health, and social care, as well as most of e-government services and others.¹³ This may be evidenced by the fact that the percentage of employees who worked remotely due to the epidemic in Q4 2022 was highest in the following sectors of Polish classification of economic activity: information and communication, professional, scientific and technical activities, financial and insurance activities — 34.6%, 18.3% and 15.5%, respectively (GUS, 2023). Yet, it also created challenges for businesses and workers who were affected by lockdowns. The government responded to the pandemic by introducing so-called “anti-crisis shields” in 2020—21. Some of the instruments of shields were aimed at support of accelerating digitalisation in Poland. The government adopted a few measures, such as faster implementation of the Broadband Fund and the Nationwide Educational Network, computer equipment for remote education and simplification of postal services.¹⁴

Besides national-level anti-crisis measures, Poland also prepared the National Reconstruction Plan (NRP) to benefit from the European Union the Next Generation

¹² <https://www.gov.pl/web/fundusze-regiony/plan-na-rzecz-odpowiedzialnego-rozwoju>. Retrieved 12.07.2023.

¹³ <https://www.parp.gov.pl/component/content/article/65361:pandemia-zapoczatkowala-w-polsce-cyfrowa->. Retrieved 07.07.2023.

¹⁴ <https://www.gov.pl/web/cyfryzacja/rozszerzenie-tarczy-antykryzysowej--cyfryzacja>. Retrieved 07.07.2023.

EU plan proposed in 2020. The main goal of the EU plan is to rebuild EU economies after the Covid-19 pandemic, transforming them, creating new jobs and opportunities in the labour market.¹⁵ In the case of Poland, a significant part of the funding reserved in the NRP is allocated to digital transformation (21.3%). One of the six areas supported by the Plan is digital transformation. It refers to activities such as: removing obstacles that hinder investments in high-speed Internet and e-services; investing in ICT solutions to make wired and wireless Internet access more widespread; strengthening cyber security; equipping schools with multimedia hardware and software.¹⁶ However, due to political conflict between the Polish government and EC over the rule of law, the funds were blocked until December 2023 when the liberal government came to power.

Another program proposed by the PiS government for 2021—2030 is the “Polish Deal.” This is a *de facto* plan (in the frame of NRP) to rebuild the Polish economy after the pandemic. A total of PLN 650 billion has been dedicated to it.¹⁷ The “Polish Deal” assumes that by 2024 every household in Poland will have access to broadband Internet and will eliminate the “blind spots” in mobile phone networks. In addition, uninterrupted access to 5G in urban areas and on major transport routes will become possible by 2025.¹⁸ One of the priority development areas in the “Polish Deal” is “CyberPoland 2025,” which was allocated almost PLN 37 billion. Key in this area is the development of e-government, including, for example, improving online administrative services, increasing the use of digital identity and integrating the existing digital identity services (the Trusted Profile, mCitizen 2.0 application, ePersonal ID), creating local digital competence development centres, such as libraries, as well as improving citizens’ digital literacy.

Furthermore, Poland develops programs related to, for instance, providing cloud services solutions, Cloud Service Assurance (ZUCH, a program launched in 2020), or articulation of the policy for the development of artificial intelligence to serve the development of Polish society, economy, and science. Policy for the Development of Artificial Intelligence in Poland is a plan launched in 2016 to create an appropriate policy for AI between 2020 and 2027. This Policy consists of six areas: AI and society, innovative companies, science, education, international cooperation, and the public sector.¹⁹

It remains an open question whether such initiatives as the ZUCH program or mCitizen 2.0 app, etc. are the symptom of nascent Polish “national capitalism,” at least in terms of promoting digital independence by establishing state-controlled digital infrastructure. Although one could sense the proactive approach of the

¹⁵ https://commission.europa.eu/strategy-and-policy/recovery-plan-europe_en. Retrieved 07.07.2023.

¹⁶ <https://www.gov.pl/web/planodbudowy/o-kpo>. Retrieved 7.07.2023; <https://www.funduszeuropejskie.gov.pl/strony/o-funduszach/fundusze-na-lata-2021-2027/krajowy-plan-odbudowy/transformacja-cyfrowa/>. Retrieved 07.07.2023.

¹⁷ <https://www.gov.pl/web/polski-lad/o-programie>. Retrieved 07.07.2023.

¹⁸ <https://www.gov.pl/web/polski-lad/cyberpoland-2025>. Retrieved 07.07.2023.

¹⁹ <https://www.gov.pl/web/cyfryzacja/ai>, <https://www.gov.pl/web/ai/polityka-dla-rozwoju-sztucznej-inteligencji-w-polsce-od-roku-2020>. Retrieved 07.07.2023.

PiS government towards building “national capitalism” with the combination of national as well as scarce EU resources, GAFAM giants still provide the most crucial security solutions and digital infrastructure for public services. As a result, GAFAM possesses more political power than the state itself (Lehdonvirta, 2022). In the case of Poland, too, governments’ efforts at digitalisation of its services seem to be also dependent on infrastructure provided by GAFAM, in particular Google and Microsoft. These companies provide tools and instruments for, for instance, e-learning, communication, and group meetings. Microsoft has been present in Poland since the early 1990s, thus the Polish government has signed multiple agreements with the company in terms of delivering essential functions in the public sphere. What is more, the company announced in May 2020 that it was locating further investments and donating one billion dollars to build the “Polish Digital Valley.” In May 2023, the Microsoft Azure Poland Central processing region was launched as the first Microsoft cloud centre in the CEE countries region. Google, in turn, opened the Google Cloud in 2021 and intends to create the biggest Google Cloud centre in Europe. Both Google and Microsoft signed a strategic partnership agreement with the Polish Cloud, a company initiated by state-controlled bank PKO and the Polish Development Fund to provide digital cloud solutions based on owned, domestic cloud platforms as well as infrastructure provided by both big-tech giants. The Polish Cloud (renamed into the Operator of the National Cloud in 2022) clients include, for example, the Ministry of Finance and the Ministry of Health (within the e-Health platform programme).²⁰

One of the recent endeavours of the PiS government is to develop cutting-edge technologies, for example, cloud computing and Artificial Intelligence, which will help the public sector (e-government). For this purpose, the GovTech Center under the Prime Minister’s Office signed an agreement in 2021 with Microsoft. According to the deal, both parties will initiate joint projects and implement solutions using cloud technologies in public administration.²¹ In September 2022, Amazon Web Services (AWS, which provides cloud services) signed an agreement in September 2022 with the Polish Cyber Defence Forces Component Command aimed at “creating strategic relationships in the field of cybersecurity related mainly to the subject of cloud computing.”²² However, the strategic cooperation of the Polish state with Amazon is still rare. To sign an agreement, Amazon launched its AWS Local Zone in Poland in 2022.²³ More generally speaking, between 2015 and 2023 the expansion of GAFAM and other digital platforms continued despite the rhetoric of the national economic sovereignty promoted by the PiS government. The result can again be described as a patchwork which combines the political project of

²⁰ <https://crn.pl/aktualnosci/chmura-krajowa-zmienia-sie-w-ochk-celuje-w-300-mln-zl-obrotu/>. Retrieved 20.12.2023.

²¹ <https://www.gov.pl/web/govtech/govtech-i-microsoft-lacza-sily>, (accessed: 07.07.2023).

²² <https://www.wojско-polskie.pl/woc/articles/aktualnosci-w-podpisanie-porozumienia-o-wspolpracy-pomiedzy-dkwoc-oraz-amazon-web-services/>. Retrieved 07.07.2023.

²³ <https://www.computerworld.pl/news/W-2022-roku-Polska-bedzie-miala-strefe-lokalna-AWS,434226.html>. Retrieved 07.07.2023.

new, developmental, “national capitalism” and the reality of dependence on FDI. On the one hand, GAFAM experienced continuous growth in the Polish market. For instance, in 2023, Amazon had already 10 logistics centres in western and central Poland, a technology development centre in Gdańsk and Amazon Web Services branch in Warsaw (launched in 2022) and an Amazon.pl online store (opened in 2021). On the other hand, the government attempted to regulate the operations of some of the GAFAM. Regulatory efforts concerned, however, mostly the operation of passenger transport platforms, such as Uber. So-called “Lex Uber” implemented in October 2020, made it compulsory for drivers carrying out orders via platforms to have a taxi licence, mark their cars as taxis and be equipped with a cash register.

Another way of measuring the outcomes of the Polish government’s policies aimed at digitalisation is public statistics indicators. The level of availability of computers in households was slightly ahead of the EU average in 2021 (92.4% as compared to EU — 92.3%) and in 2022 (93.3% as compared to EU — 92.4%) (Eurostat, 2022, GUS, 2022) reflecting a longer-term increase. Also, the frequency of Internet use approached the EU average in 2022 (85.7% as compared to EU — 88.6%), and, what is more, it increased by more than 20% over 7 years. Individual levels of computer and digital skills continue to remain at the same level (51.4% as compared to EU — 56.8%), and, in the case of the latter, it could even be said to be declining — in 2021 it was 42.9% as compared to EU — 53.9%. In the case of individuals using e-government services, a steady and stable increase can be observed in the periods 2015—19 and 2020—22 when the dynamics increased, influenced by, for instance, the arrival of the pandemic; yet it still lags behind the EU average (29.4% of citizens using e-government services in Poland in 2021 as compared to 47.4% using them in the EU-27).

Conclusion

The article aimed at exploring the relationship between the emergence of a peculiar variant of “dependent,” or “patchwork” capitalism in Poland and the digitalisation of the Polish economy and society. Based on the literature review and the analysis of secondary data, two preliminary observations can be formulated. Firstly, it can be concluded that the political decisions — reforms, programs, and policies — taken by the Polish governments to develop the digital economy and society in Poland ultimately yielded half-hearted, and to some extent incoherent, results. Some indicators of digitalisation eventually increased (e.g., households Internet access), but in the most crucial cases, Poland scored worse than the EU average in 2021—2022, for instance, in the case of the use of e-government services, individuals’ level of internet and computer skills.

Despite policies aimed at technological upgrading and regaining national economic sovereignty, the country’s dependence on large, foreign-owned infrastruc-

tural platforms seems to increase over time, regardless of political forces in power. This outcome can be explained with the reference to the concept of “patchwork capitalism” which assumes the co-existence of various institutional logics and limited barriers to entry of new elements (actors, values, ideas) to socio-economic order. Neither the right-wing turn in 2015, nor the Covid-19 pandemic and subsequent polycrisis have led to a deep change of the main properties of institutional order, but rather added new elements to it (e.g., the ideologies of national independence) and mixed them with existing ones (e.g., limited social dialogue and governments’ unilateralism in industrial relations). Faced with a polycrisis in 2015–2023, the PiS government “did not focus on creating a specific, ‘crisis-oriented’ institutional architecture for the economy as a whole which would meet the criteria of coherence and complementarity” (Gardawski & Rapacki, 2023, p. 89).

Despite a range of positive developments and growing digital potential, Poland, as argued by Kordalska and Olczyk (2023, p. 286), found itself in a “functional trap” related, e.g., to “an insufficient functional upgrading of CEE industries and the inability of CEE countries to shift their functional specialisation patterns towards more knowledge-intensive value-added functions, especially in pre- and post-production.” In this context, the key role played by global infrastructural platforms in the Polish way to a digital society might be interpreted as the consequence of the DME model that emerged in the 1990s and 2000s. In the DME 1.0, know-how and innovation were transferred from the core countries to semi-peripheries, which functioned as regional “assembly plants.” As demonstrated in the article, the metaphor of an “assembly plant” is still applicable, but in a slightly nuanced meaning. The new incarnation of DME, which can be tentatively called DME 2.0, is the access to the data and critical infrastructure which is mediated by big tech giants not only in semi-core and semi-peripheral countries of CEE but also globally. If the latter hypothesis is correct, Poland and other CEE countries might be seen as a laboratory of socio-economic and political reforms which over time increased far-reaching dependency on global, private high-tech infrastructure and know-how. As documented by the growing body of research on platformisation (e.g., Lehdonvirta 2022), this trend started to affect the technologically most advanced countries in Western Europe.

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