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Poland's transformation: Facts and myths about the period 1990–2020 and the country's chances of attaining the economic level of the USA and Germany after 2020

I. Introduction: Three revolutionary economic changes in the world

Around 1990, the world witnessed the arrival of two major changes that could be described as revolutionary. One of these changes occurred in the countries of “real socialism” and involved the collapse of the economic system that had been based on the state bureaucracy playing a central role in deciding what should be produced, how, and for whom. As a result of systemic transformations, these countries transitioned in a very short time to a largely competitive, free-market economy. In the political sphere, Europe also experienced surprisingly rapid and fundamental change: the breakup of the Union of Soviet Socialist Republics (USSR) and the Warsaw Pact, the unification of Germany, and democratization in Central and Eastern Europe. In the second part of the paper, I will compare certain myths about how this transformation played out in Poland against the facts.

The second crucially important change involved much faster rates of growth in GDP *per capita* than before in countries that had been poorly developed until 1990 and, which taken together, accounted for around 85% of the world's population. These countries included China and India.

In highly developed countries, growth in GDP *per capita* (or strictly speaking, per working hour), depends almost entirely on the pace of growth in the sector driving technological change and improving the skills of the workforce. Over the past two centuries, the trends regarding the pace of development in those countries have been fairly stable over time and similar, with the annual growth in GDP *per capita* hovering around 1.2–1.5%.

In what are sometimes referred to as “catching-up countries,” the pace of economic growth depends above all on their volume of technology transfer from highly developed

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countries, and this volume depends on their economic policies, in particular the level of investment in relation to GDP, the quality of institutions, and workforce skills. As a result of this, the pace of catching up varies widely across countries and over time – as demonstrated by data from the World Bank and the International Monetary Fund (IMF) – with growth in GDP *per capita* usually falling within the wide range of 1–10% a year (Gomulka 2017).

In the 19th and 20th centuries, the percentage income gap between those countries and highly developed countries had continually risen, as had the civilization gap in general. As a result of the second of the two crucial changes mentioned above, however, around 30–40 years ago these two gaps rapidly started to narrow. The countries affected by this transition – from divergence to convergence – also include Poland.

The past 40–50 years have also witnessed a revolutionary institutional and political change in Europe, namely the establishment and development of the European Union (EU) along with the economic, developmental, and political consequences that this has brought for the member states and for the globe. Economic and political changes brought by the first revolution also facilitated the EU's enlargement. Poland did not join the EU until as recently as in 2004. Over the past four years, Poland has encountered problems with fully accepting the consequences of membership (Wilkin 2019). In this paper, I will list some of these problems.

Development means not only growth in GDP *per capita* or in wealth *per capita* but also changes in all other factors that impact significantly on the quality of life. In the third part of the paper, I will restrict myself to only four fields of such changes in Poland: the quality of political democracy, the level of income and wealth inequality, demographic changes, and the quality of the natural environment against the backdrop of other countries, chiefly the EU member states.

In the fourth part of the paper, I will present Poland's position in the process of bridging the development gap in relation to the United States and the economically and institutionally most developed countries of the EU. I will touch upon the issue of further possibilities of narrowing the gap with respect to GDP *per capita* in the next 20–30 years, depending on strategic choices in economic policy. In this context, I will address the following issues:

- 1) Reasons behind the high rate of growth in 2016–2019;
- 2) Forecasts of GDP growth and the condition of public finance in the next few years;
- 3) Adjustments in economic policy needed in the next 10–30 years;
- 4) Long-term forecasts of GDP *per capita* in several scenarios;
- 5) The costs and directions of fundamental transformations needed in the energy sector.

II. Facts and myths about the transformation in Poland

The key reforms launched in late 1989 and during the 1990s still sometimes come under criticism, including on the part of influential politicians. Did Poland have an evidently better modernization alternative? In order to answer this question in a reliable way, we must first point out several important facts.

A good lead-in to the key reforms of late 1989 and early 1990 was provided by the following measures: “Wilczek’s reform”, which liberalized business activity (the Business Activity Act of 23 December 1988), the National Bank of Poland (NBP) Act and the Banking Law of 31 January 1989, which allowed for the operation of private banks, and the establishment of nine regional commercial banks based on some 400 outlets of the NBP. Other important reforms involved allowing for the emergence of the foreign exchange market based on around 20,000 private foreign currency exchange offices in the first half of 1989, and far-reaching liberalization of food prices in August 1989. These important market-oriented measures were taken partially in response to the IMF’s recommendations, made at the request of the Polish government in 1985.¹ Those recommendations were initially ignored by the Polish authorities, but they started to be taken into account when the Rakowski government was formed on 27 September 1988.

However, those market-oriented measures also revealed the dangerously large scale of macroeconomic disequilibrium shortly before the appointment of the Mazowiecki government on 12 September 1989. In August 1989, the market price of the dollar reached such a high level that a monthly wage was equivalent to around USD 20, and the inflation rate in that month alone was estimated at around 50%. The foreign-exchange reserves of the NBP and commercial banks were very low – slightly under USD 2 billion. In turn, the formal dollar deposits held by households in banks totalled around USD 5 billion and those held by businesses amounted to nearly USD 3 billion. Poland’s foreign debt to the members of the Paris Club was not being serviced, and the state’s budget deficit was being financed through money printing. In August 1989, Poland was therefore in the state of an exceptionally profound economic and financial crisis whose scale was significantly greater than the situations faced by the other European countries of “real socialism”.

Despite that profound crisis, however, the transformational recession – inevitable in response of the necessary liberalization of prices and the breakup of the rouble-

¹ As the IMF’s chief adviser on Polish affairs in 1985–1987 and the author of a special report commissioned by the IMF in 1985 (Kowalik, 2010, Document No. 175), I was one of the formulators of those recommendations (I forwarded the report directly to several economists in Poland, including Leszek Balcerowicz and Władysław Baka, who then served as governor of the NBP).

based trading bloc (the Council for Mutual Economic Assistance, COMECON) in 1991 – in Poland (and Slovenia) was smaller in scale and lasted shorter than elsewhere in the Eastern bloc countries. In turn, the increase of the GDP *per capita* measured in terms of purchasing power parity (PPP) was exceptionally large in the 30-year-period under discussion: from 30–40% of the level reported in Western Europe and in the United States in 1989 to 50–60% in 2019, in other words to a level much higher than had been seen over the past two or three centuries (Piątkowski 2018).

Table 1. GDP *per capita* with reference to the United States: comparison between Poland and other post-socialist countries at the beginning of the transformation and in 2018

Country	Initial year	Level in initial year	Level in 2018
Central Europe and Russia			
Poland	1989	30.1	50.0
Bulgaria	1990	35.0	35.1
Czech Republic	1995	48.0	63.4
Estonia	1993	28.0	56.6
Lithuania	1995	24.0	56.4
Latvia	1992	23.0	49.0
Germany	1990	86.7	85.8
Russia	1992	24.0	43.3
Romania	1990	30.8	45.0
Slovakia	1993	31.0	54.1
Slovenia	1992	44.0	61.0
Ukraine	1992	24.0	14.7
Hungary	1990	46.0	49.0
Central Asia and China			
China	1990	4.1	29.1
Armenia	1992	6.0	16.5
Azerbaijan	1992	7.0	28.8
Georgia	1994	6.0	18.2
Kazakhstan	1992	28.0	44.1
Kyrgyzstan	1992	7.0	6.2
Tajikistan	1992	5.0	5.5
Turkmenistan	1992	12.0	30.8
Uzbekistan	1992	7.0	11.2

Source: World Bank, the most recent database, gives GDP *per capita*, PPP as percent of the US level (constant 2011 international \$)

One of the several most important reasons behind this historic success was the fact that the new domestic private sector outside agriculture expanded exceptionally rapidly only in Poland (Dąbrowski, M., S. Gomulka, and J. Rostowski 2001). A substantial role

in that expansion after 1988 was played by the country's opening up to the West in 1971–1981 and in 1984–1989, which had led to robust growth in private financial and human capital in Poland. However, most probably it chiefly resulted from a handful of reforms (legislative acts) launched by the Mazowiecki government at the beginning of 1990, with a crucial role in the drafting and implementing of those reforms being played by Leszek Balcerowicz and his associates, as well as from the economic policy pursued by that government and the following cabinets and parliaments as well as consecutive governors of the NBP (Gomulka 1998).

Before 1989, the share of the private sector in total employment was relatively large (32% in 1970, 26.6% in 1980, and 30.9% in 1989), but the share of the private sector outside agriculture was very low – 2.9 percent in 1970, 3.6 percent in 1980, and 7% in 1988 (Jarosz-Nojszewska, Morawski & Zawistowski 2017).

The success of Poland's economic policy in the transformation period is evidenced by the fact that since 1992 Poland has not experienced any recession on an economy-wide scale, nor any banking crisis. Fiscal policy, though not exemplary, did not play a strongly destabilizing role. Monetary policy was focused on gradually reducing inflation for the first 10 years, then on maintaining price stability for the past 20 years. The creation of a competent system of banking supervision has been a considerable success.

It is astounding how many critics of Poland's transformation strategy, not only politicians and journalists but also academics, formulate opinions that are at variance with these and other important and generally indisputable facts. I will adduce several such opinions.

1. Wages, prices, and pensions

The view that the year 1990 witnessed “an extremely large” decline in real wages is mistaken. It ignores the excessive increase in average real wages in the previous two years: by 13.6% in 1988 and by 26% in 1989. In 1990, real wages fell by 26.7% compared with the level in 1989, but only by 7.7% compared with the situation in 1987.

Another mistaken view holds that old age and disability pensioners were hard-hit in the initial period of the transformation. In 1990, their pensions were adjusted every quarter. As a result of the adjustment by nearly 31% in January 1991, the average pension rose in relation to the average wage from 64.1% in 1990 to 75.6% in 1991, the highest level in the whole of the 30-year period. Such strong growth complicated the situation of the state budget in 1991–1992 to a considerable extent.

Another myth is a view that has been propagated for many years and holds that the reformers were too focused on lowering inflation. Indeed, the plan for 1990 did call for

bringing annual inflation below the level of 10% as early as at the end of the year. In reality, however, inflation was reduced gradually, and it took 12 years to lower inflation from 250% in 1990 to below 10% a year.

2. Privatization

Another myth is that privatization was carried out too hastily and without securing public interests to a sufficient degree. In reality, already at the end of 1989, the Council of Ministers issued a regulation prohibiting workers' councils from appointing individuals who were owners of private companies as members of the management boards of the Treasury-owned companies. The regulation cut the flow of profits from the public sector to the private sector. The state-owned enterprises in Poland were privatized exceptionally slowly in comparison with other European countries of "real socialism." This was because the Polish reformers rejected the kind of mass voucher privatization that was carried out in the former Soviet countries and Czechoslovakia, and the government of the Democratic Left Alliance (SLD) and the Polish People's Party (PSL), headed by Waldemar Pawlak, limited voucher privatization through national investment funds to slightly over 400 medium-sized enterprises, which employed a total of around 200,000 staff. Unfortunately, "reprivatisation" (property restitution) was likewise too slow, partially for reasons related to its considerable costs for public finance.

Poland's economy was privatized relatively quickly, with the share of the private sector in GDP rising rapidly from 9.7% in 1988 outside agriculture and from the general level of 19.2%. However, political assessments and commentaries often fail to mention the reasons behind this situation: fast growth in the new domestic private sector, a large inflow of private foreign direct investments (FDIs), and a steep decline in production in most of the state-owned enterprises and cooperatives that witnessed a drop in demand for their products and services in the new price and trading conditions. Even now, the share of the public sector in Poland's GDP remains among the largest in the EU countries (Błaszczuk 2017) and currently poses a burden for the economy. This pertains in particular to the energy sector.

The first four years of the transformation witnessed a substantial rise in the registered unemployment rate: from 0% in 1989 to 6.3% in 1990, 11.8% in 1991, 13.6% in 1992, and 16.4% in 1993. In 1994–1999, the registered unemployment rate stood at an average of around 12%. In that period, many potentially unemployed individuals decided to take advantage of the possibility of going into retirement. Unemployment benefits were introduced, and they were initially high. In 2001–2004, the registered unemployment rate again rose to a very high level, namely around 19%. In turn, Poland's accession to the EU in 2004 immediately opened up access to the labour markets in the UK and Ireland, which was an important reason behind a significant decline in unemployment in 2005–2010.

In addition, it is sometimes claimed that the IMF played too great a role. Even in the initial period of the transformation, however, the IMF's role in the Polish authorities' economic policy was essentially advisory, largely due to the similarity of views. It was nonetheless very helpful in reducing by half the high debt to countries (30% in 1991 and 20% in 1994) and Western banks (1994). In January 1990, the IMF approved a credit line for Poland, but no drawings were made under that arrangement².

The main reforms were drafted by the Polish side (12 acts of legislation adopted at the end of 1989 are included in vol. 1 of the *Transformacja polska* series, Kowalik, 2010). This pertained not only to “Balcerowicz's Plan” for the fourth quarter of 1989 and 1990 but also to the Suchocka government's important stability-focused fiscal policy in the fourth quarter of 1992 and 1993 (when Jerzy Osiatyński held office as finance minister), which made it possible to reduce the public finance deficit by 5 percentage points of the GDP and to lower the foreign debt to the members of the Paris Club by a further 20% and to private banks from the London Club by 50%.

3. Industry

In the transformation period of 1990–2018, the share of industry in GDP creation fell substantially from 25% to 22%. This statistical fact helped give rise to another two myths: one held that a period of de-industrialization actually occurred, and the other that this decline was caused by the displacement of industrial production by services. The former myth remains quite popular among critics of Poland's transformation strategy. But what are the facts?

If we take the value of GDP at constant prices in 1990 as 100, then in 2018 this figure was 276 according to the Central Statistical Office of Poland (GUS). In turn, sold industrial production at constant prices rose from the level of 100 in 1990 to 412 in 2018. Over these same 28 years, the average rate of GDP growth was 3.6% a year (or 3.3% over 1989–2018), while industrial production grew at an average rate of 5% a year. We can only speak of a phenomenon of de-industrialization in the context of 1990, when industrial production declined by 24.2%, and 1991, characterized by a drop of 8%. However, declines such as those reported in those two years largely actually should have taken, or indeed had to take place, because existing industrial products were ill adjusted to market demand or because the unit costs of production were too high.

But what was the reason for the decline in the share of industry in GDP at current prices over the whole of the transformation period? This drop was – and still is – main-

² A key role in the decision to provide that assistance to Poland was played by the G7 countries. Documents related to that and other debt reduction decisions can be found in vol. 2 and 3 of *Transformacja polska: dokumenty i analizy* (“The Polish Transformation: Documents and Analyses”) (2011, 2013).

ly caused by the fact that the prices of industrial products rise at a systematically slower pace than the prices of services, due to systematically faster growth in labour productivity in industry than in services. These differences in the pace of growth in labour productivity and in prices are a general global phenomenon.

III. Civilization development: trends in Europe and problems in Poland

1. Political democracy

One of the most important components of civilization development is the quality of political democracy. The Economist Intelligence Unit compiled an index measuring the condition of political democracy in all 40 European countries in 2016 (Madej 2017). It is based on five categories, each rated on a scale from zero to 10: electoral process and pluralism, functioning of government, political participation, political culture, and civil liberties. The index distinguishes between four types of regimes: full democracy, flawed democracy, authoritarian regime, and hybrid regime. According to the authors of the ranking, the only authoritarian regimes in 2016 were Russia and Belarus. Five countries were classified as hybrid regimes, only one of them being significant, namely Ukraine. Fourteen countries were classified as full democracies. Among this group Switzerland and four large countries, namely Germany, the UK, Spain, and the Netherlands. Other Western European countries score only slightly worse than those countries, whereas the Baltics and the Czech Republic and Slovakia are somewhat farther down in the ranking. In the countries described as flawed democracies, the category “electoral process and pluralism” has high scores. Another category that scores quite well is “civil liberties.”

In Poland’s case, the category “political culture” has an exceptionally low score. “Government functioning” also scores low, and “political participation” is also rather low. Consequently, the EIU concluded that the quality of political democracy in Poland in 2016 was among the lowest in the EU.

In 2017–2019, Poland’s score was declining, a view confirmed by the Economist democracy index for 2019. This is because the executive took political control of the prosecution service and the public media, the civil service, the Constitutional Tribunal, and the National Council of the Judiciary (KRS) and attempted to take over control of courts, including the Supreme Court. This has created threats not only to democratic processes and in the political sphere, which resulted in the lower quality of legislation, but also to actual respect for civil rights in the civil and economic area.

A low level of political culture among voters had a considerable influence over the economic platforms of the parties that ran for parliament in 2019. Proposals were made that were aimed at making substantial improvements in people’s financial situation in a short time, despite having a considerable destabilization potential in the long term. This included such pledges as: to increase radically the minimum wage in 2020–2023;

to increase rapidly and substantially public spending on health care in relation to GDP without raising health care contributions; and to introduce so-called “13th pensions” and “14th pensions” (extra annual payouts to pensioners) without raising pension contributions and formal retirement ages, or offering tax incentives for those who want to continue working after reaching the retirement age. In the campaign preceding the parliamentary elections, almost all parties failed to support such proposals as: private co-payments for public health-care services and education; public co-payments for private health-care services and private schools; equal retirement ages for men and women; reduced pension privileges; the lifting of the prohibition on terminating a worker’s employment contract for four years before they reach the formal retirement age; the presentation of ways to achieve and maintain an average zero or near-zero deficit in public finance; the presentation of ways to finance swift reductions in carbon dioxide emissions; or setting an approximate date for Poland’s accession to the euro zone.

During the parliamentary campaign, some political leaders argued that the proposed very large and rapid raise in the minimum wage was a good method for “reaching the European pay levels quickly.” In the short term, such a populist idea trumps politically the arguments raised by economists, who say that in the long run real wages are always determined by labour productivity, which in turn depends on skills and technology, which in turn depend on investment expenditures, the quality of education, good institutions, as well as the talents of innovators and entrepreneurs.

2. Income and wealth inequality

In his review article, Michał Brzeziński (2017) draws the following conclusions:

- Income inequality remains high, and over the past several decades it has shown a tendency to grow in most countries, even in Denmark and Sweden. Based on income data from tax returns, inequality estimates have been recently adjusted upward, revealing a level of inequality significantly higher than survey-based estimates.
- After these adjustments, the actual Gini coefficient for Poland may be as high as 0.55, not around 0.30–0.40, as was previously believed. Such a result places Poland among the countries with the highest level of inequality in the world.
- Two other important gauges of income inequality are: (A) the percentage share of people who live below the subsistence level; and (B) the percentage share of people who live in extreme poverty – those who are legally entitled to social benefits and claim them. According to the most recent figures from the GUS, the indicator labelled “A” reached 5.6% in 2008, rose to 7.4% in 2014, and then fell to 4.3% in 2017. Surprisingly, it rose to 5.4% in 2018. However, the indicator labelled “B” rose even more rapidly – from 10.4% in 2017 to 14.1% in 2018. These data

prove that labour and skills play an important role in eliminating poverty, whereas the role of social transfers remains limited.

- The level of wealth inequality is significantly higher than income inequality practically everywhere. In Poland, however, it is lower than in highly developed countries.
- A significant level of income and wealth inequality may impact positively on the pace of economic growth, but if it is too high, it may play a socially and politically destabilizing role and therefore impact negatively also on the pace of economic growth. What poses a problem are not income levels among members of the middle class, but a very high level of wealth held by a small percentage share of people.

Importantly, the tax system and social transfers as well as spending on health care and education in every country should as a matter of principle be targeted towards reducing poverty and utilizing the creative talents of people to the fullest possible extent. In Poland, the economic policy in the period of transformation remained under the influence of that principle, known as the “social market economy” paradigm, dominant in the EU countries.

3. Demographic trends

Over the past 30–40 years, Europe has experienced three types of demographic changes: large-scale immigration, a low rate of natural population increase, and growth in average life expectancy. The impact of immigration applies in particular to Germany, France, the UK, and Sweden, and it has been large enough to introduce a visible cultural, national, and religious diversity into the fabric of society but also sufficiently moderate and gradual to make this diversity acceptable to and appreciated by local communities. In turn, growth in average life expectancy has brought acceptance for longer employment activity as something natural and appropriate.

In Poland, such demographic changes started after the country joined the EU in 2004. Initially, they were mainly related to increased emigration. According to estimates, there are around 2.5 million Polish nationals who have the status of emigrants – those who have lived in other EU countries for at least three months. The number of foreign nationals who live in Poland and have a similar status is estimated at around 1.5 million. Increased immigration in the past several years appears societally acceptable, but this may be because it has mainly involved individuals who are close to the Poles in terms of their national, linguistic, and religious characteristics.

Over the past 30 years, Poland has likewise witnessed a considerable rise in average life expectancy – by eight years for men (to 74 years, still five years less than the EU average) and by 6.5 years for women (to 81.8 years, only two years less than the EU average). As yet, however, this longer life expectancy has not been coupled with public acceptance for higher formal retirement ages and longer periods of employment activity.

Likewise, Poland has been characterized by growing acceptance of equal treatment for men and women, yet probably on a much smaller scale than in the old EU countries. Finally, despite the formal separation of church and state, the political role of the institutional Catholic Church as a clearly dominant religion remains large. Although this role is probably dwindling, it will remain much greater than in the old EU countries for the next several decades, perhaps even several generations.

Integration trends in Europe apply not only to the economic and political sphere but also to the linguistic, legal, and moral sphere, or in other words, to what is generally referred to as culture. These trends became visibly stronger when Poland and other Central European countries joined the EU. However, it will be some time before English becomes the second language used on a mass scale in Poland and the Constitution and the International Bill of Human Rights become commonly accepted laws.

4. Trends in the improvement of the quality of the natural environment in Poland and in the old EU countries

Nicholas Stern, a prominent British economist, formulated the following opinion on the occasion of the Climate Change Conference in Katowice in December 2018:

“The transition to a zero-carbon economy is the inclusive growth story of the twenty first century. It needs to be managed with effective and cohesive policies, whilst recognizing that sustainable development, inclusive growth and climate action are interwoven and mutually supportive.” (Stern 2019)

The shift away from a carbon-based economy started in the UK and France in the 1970s, with trends towards nuclear energy becoming significantly stronger in the 1980s. Over the past 30 years (1990–2019), the EU has witnessed the emergence of a new and increasingly important component in this trend, namely renewable energy sources (RES). The UK is expected to phase out all coal-based power plants by 2025. As a result of technological progress, the years 2009–2018 witnessed a marked drop in the unit costs of electricity production in the RES segment. On the other hand, total unit costs of the production of coal and oil-based energy are growing. Likewise, the abandonment of traditional energy sources has been substantiated with important environmental and climate-related reasons as well as the depletion of natural resources, inevitable by the end of this century. In 2018 and 2019, Poland imported around 25% of its demand for coal and around 10% of its demand for electricity. Identified coal deposits are large, but the costs of building new underground mines are so high that the exploitation of such deposits is usually unprofitable. Consequently, even official government forecasts warn of the possibility of a major energy crisis around 2030.

On the scale of the globe, alarming fundamental environmental quality parameters include: rapidly growing greenhouse gas production, a considerable rise in temperatures in vast areas of the globe and the related sea level rise as well as growing instability

in the supply of water to plants, animals, and people. The EU has responded to this situation with what is referred to as the European Green Deal. The EU accounts for only around 10% of the world's net production of carbon dioxide, but *per capita* emissions are still above the world's average. The EU's strategic goal now involves reducing this share to zero by 2050, which means reducing the emissions of carbon dioxide by humans and animals to the level of its absorption by trees and plants. Efforts to implement this goal are helped by what are important and essentially revolutionary technological innovations in the field of renewable energy sources and means of transport propelled by electric motors. Animal farming for meat production accounts apparently for around 20% of the world's greenhouse gas emissions. Recent years have witnessed the arrival of a new technology also in this field: the production of cultured meat, with a culture of animal stem cells being grown with the use of plant-based culture medium.

Over the past 20 years, the measures taken by Poland in the RES field were a lot less intensive than in the EU. Over this period, Poland and the EU have started to move in diverging directions in the field of energy policy. Consequently, the trends that prevail in Poland include a high death rate and the more common occurrence of diseases caused by low and worsening air quality, growing costs of carbon dioxide emissions permits, a growing risk of draughts, floods, and periodical water supply crises as well as the risk of rapidly growing energy prices and, after 2030, the prospect of energy shutoffs on a significant scale. These adverse trends and risks persist despite a strong reduction in the role of coal in the economy (electricity, heating, and the metallurgical sector) in 1990–2000 as a result of the systemic transformation. In 2017, according to EC data (2018), the carbon dioxide emissions *per capita* in Poland (8.48 metric tons) were nonetheless higher than the EU average (6.97 metric tons) and much higher than the world's average (4.91 metric tons).

Achieving the goal set forth by EU for 2050 will require major and swift changes in the country's economic policy: opting out of creating new brown coal opencast mines and coal-fired power plants, shutting down existing coal mines and gradually phasing out most coal-fired power plants, in addition to the construction of a distributed network of water reservoirs by local governments, the modernization of power grids by the state (in order to reduce what are currently considerable losses), and the complete elimination of heating with the use of old polluting coal-fired stoves. As a part of a new strategic policy, we also need to leave the production of electricity mainly to the private sector.³

³The actual energy mix in 2019: 75% coal, 11% renewables, 8% natural gas, 6% other. The energy mix proposed by the current government in 2040 calls for 50% coal, 20% nuclear power, 20% renewables, and 10% natural gas. Given the costs of energy production and the climate objectives, a reasonably good mix for this year would envision 50% renewables, 30% coal, 10% nuclear power and 10% natural gas, while a good mix for 2050 would be 70% renewables, 20% nuclear

IV. The Polish economy's chances for reaching the Western levels of the GDP and wealth *per capita*

In 1989, Poland's GDP *per capita* (PPP) was 30.1% of the US level, compared with 84.2% in Germany (without East Germany), according to the IMF's figures. A radical change in the economic and political system and a profound reorientation of economic and technological links have drastically reduced the barriers limiting Poland's access to technological innovation. Poland became one of the "catching-up" countries. The success of its efforts is evidenced by the fact that according to the IMF, Poland's GDP *per capita* (PPP) in 2019 reached 51.4% of the US level and 60.9% of the level reported in Germany (together with the former East Germany).

Another important gauge of a country's economic condition is wealth *per capita*. In Poland, this is still only one-sixth of the levels reported in the United States and Germany. As a result of low domestic savings in relation to the GDP, the reduction of this very wide gap is only possible to a limited extent in the next 30 years.

Hence the proposed forecast that Poland stands a chance of (almost) reaching the level of the GDP *per capita* in the West by 2050, but the difference in terms of wealth *per capita* will remain (very) large for much longer.

1. Interpretation of the rapid pace of growth in Poland's GDP in 2016–2019

In 2016–2019, the GDP rose at a much faster pace than the long-term trend in the 30-year period between 1989 and 2019, namely 3.3%. There were many reasons behind this exceptionally good economic situation. Here, I will list four particularly important ones:

- the economic situation in the EU was better than average, which stimulated Poland's exports and increased the level of domestic capacity utilization;
- private consumption grew rapidly, stimulated by higher social transfers and a rapid raise in income levels, which also increased the level of capacity utilization;
- many people immigrated from Ukraine and Belarus in search of jobs, which made it possible to increase employment;
- there was a high level of investments funded by foreign, private and EU, funds.

Developments after 2019 are likely to be quite different than during the last 30 years. Due to a health-related global recession in 2020, the GDP in Poland is expected to remain in 2021 at the level in 2019. After 2021 the trend rate of growth of the GDP *per capita* should fall significantly below the level in 2016–2019. The reasons for this are as follows:

power, and 10% natural gas. By comparison, Germany aims to produce already in 2030 65% energy from renewables, and in 2040 no energy from coal.

- a lower pace of growth in the EU's GDP, around 1–1.5% instead of 2–3% in 2016–2018, and – as a result of this lower pace of growth and problems in global trade – a lower rate of growth in the EU's exports, which will translate into a lower growth in Poland's exports to the EU;
- a substantial decline in the Polish working-age population and a low, perhaps even dwindling level of employment activity;
- an inevitable decline in the EU investments in Poland after 2022;
- in the years after 2021 the most important thing will be that as “catching-up countries” near the level of the GDP *per capita* in the most developed countries, the rate of GDP growth in each such “catching-up” country, including Poland, falls automatically, eventually reaching the level of 1–1.5% a year.

2. Forecasts for the next several years

In 2020 the global economy found itself unexpectedly in the state of a significant recession, caused by restrictive government measures intended to reduce the human cost of a large world-wide coronavirus epidemic. The GDP is expected to fall by some 3–5% globally, and by some 5–10% in the EU and the USA. To limit that recession in the course of 2020 and to initiate a recovery in 2021, very expansionary monetary and fiscal policies have been adopted. The expected outcome is that the total change of global GDP will be close to zero in the period 2020–2021. Developments in Poland are likely to imitate those in the world. These developments are expected to increase sharply the public debt and reduce private investment for several years after 2021, but to have a limited impact on the trend rate of growth in the long term.

Already in 2017, the IMF pointed out to three phenomena in Poland: since 2012, the working-age population in the country had been dwindling at a rate of 1% a year, investments in fixed assets made by Polish private-owned companies accounted for a mere 11% of the GDP in 2004–2016, and the pace of growth in the total productivity of the main production factors, namely labour and capital, fell from 2.4% in 2003–2007 to 1% in 2013–2016.

The proposals included in the incumbent government's economic program are quite detailed on two important issues. If implemented consistently, these proposals could pose a problem in the long run. They are:

1. *A change in the pension system that involves introducing additional pension payouts (13th and 14th pension) financed from the state budget.*
2. *A radical increase in the administratively determined minimum wage, much faster than the rise in labour productivity.*

The proposed large increase of the minimum wage, if implemented, would create the illusion that real wages are determined by politicians, rather than by investments

and technology, and so by businesses and employees. The very large increase of public debt in 2020 may force the government to abandon the implementation of proposals 1 and 2.

After Poland's accession to the EU in 2004, the EU's funding of nearly half of public investments played an important modernization role in the country, especially in the field of infrastructure (CASE 2019). After 2022, this funding will be reduced significantly. From 1994 to 2018, an important role in the development of the export sector and the technological innovation was played by foreign investments: an average of 3.3% of the GDP a year, around 15% of all investments. However, the political doctrine pursued by the governing Law and Justice (PiS) party considers them a threat to national sovereignty. This may reduce the inflow of FDI.

3. Adjustments needed in Poland's economic policy

In the long run, the pace of economic growth is determined by two factors: a percentage change in the number of people who work and the pace of qualitative change in such fields as technology, employees' skills, and the quality of institutions. The number of people who work is influenced positively by considerable net immigration and negatively by the dwindling number of the Poles of working age – according to the GUS, this number will decrease in 2020 by 484,000 compared with 2018 and by 1.2 million compared with 2015. In the future, the number of people who work will be affected negatively by two factors: Poland's shrinking population and the growing share of pensioners in this population. In turn, the pace of qualitative changes in “catching-up” countries, which include Poland, is mainly influenced by the share of investments in the GDP, because investments largely determine a country's ability to absorb innovation. Since the share of the EU-originated savings and investments in the GDP of Poland will almost certainly decrease, measures are needed that will increase domestic savings and investments.

The negative impact of the lower statutory retirement ages on labour supply is estimated at around 700,000 people. Also, Poland is entering a period of a demographic decline. So far, these two developments have been compensated by the inflow of workers from Ukraine and other countries as well as the flow of workforce away from agriculture.

In the highly developed countries, the expected long-term pace of GDP growth *per capita* in the coming decades is 1.2–1.5% a year. However, there are considerable differences in this respect within specific countries despite the same economic policy and the same institutions: between the South vs the North in the UK and in Italy, between the West and South vs the East in Germany, and between California and states in the East vs the central states in the United States. Usually, these are differences of 1 : 2, sometimes even 1 : 5.

The existing differences result from considerable variations in the level of human and physical capital. In the EU, there are highly developed countries with a high level of the GDP *per capita* (group A countries) and countries with visibly lower GDP levels (group B countries). Group A chiefly comprises Germany (without the former East Germany), the UK, the Netherlands, Belgium, Scandinavia, and Ireland, whereas group B comprises Italy, Spain, the former East Germany, perhaps also Greece, Slovenia, the Czech Republic, and Portugal.

I propose to adopt the assumption that Poland, given the consumption and investment preferences of its inhabitants, may be capable of joining group B.

4. Four scenarios of economic growth in 2020–2040

In the main scenario for Poland, I propose assuming that the average rate of growth in the GDP *per capita* will be 2.5% until 2030 and 2% in 2030–2040. This scenario is based on the assumption that Poland will join the group B countries in 2040, when the *per capita* income gap between Poland and Spain and Italy is closed. In the optimistic scenario, the rate of growth until 2030 would be higher by 0.5 percentage point, which means 3% a year. In the pessimistic scenario, it would be lower by 0.5 percentage point, which means 2% a year. Let us call these Scenario One (the optimistic scenario), Scenario Two (the standard scenario), and Scenario Three (the pessimistic scenario).

If we adopt these assumptions, Poland's position would be as follows: in Scenario Three, the development gap between Poland and wealthy countries would stop narrowing in 10–15 years, with the average income *per capita* reaching the level of around 65% of the income *per capita* in Germany (without the former German Democratic Republic). In Scenarios One and Two, the narrowing of the income gap would continue until 2040, when the average income in Poland would reach 70–75% of the average income in Germany (without the former German Democratic Republic) in Scenario Two and 80–85% in Scenario One. Each scenario is related to a different economic policy.

In Scenario One, economic policy would aim at maintaining a stable number of people employed in the non-agricultural sector, lowering considerably the number of those working in agriculture and low-productivity enterprises, maintaining solid public finance (with an average deficit near zero), and a large share of investments in fixed assets in national income (more like 20–25% of the GDP than 15–20%).

V. Concluding remarks: slower trend rate of economic growth and growing tension in public finance

The government's economic policy implemented in 2016–2019 favoured consumption more than investments. Total investments in fixed assets in relation to the GDP

reached 20.1% in 2015, but fell to 17.7% in 2017 and 18.2% in 2018. This happened despite the fact that Prime Minister Mateusz Morawiecki stressed the importance of investments, especially domestic investments, for economic development. In addition, the lowering of the formal retirement ages will mean a strong decline in the number of people who work (700,000 over 5–10 years). It also means the risk of strong growth in budgetary subsidies for the pension system. In such a situation, it would be more difficult to cope with the budgetary criteria for accession to the euro zone.

The coronavirus-related recession in 2020 poses a considerable risk to economic developments in Poland in the early 2020s. According to official forecasts the Polish government's policy response to this recession will cause the public debt to increase to about 62% of the GDP by the end of 2020 and about 64% by the end of 2021, thus exceeding the constitutional threshold of 60% of the GDP. If fiscal and monetary policies continue to be highly expansionary also after 2021 we could witness developments worse than Scenario Three, which we can describe as an extremely pessimistic Scenario Four. It could even include the materialization of certain alarming forecasts anticipating a public debt crisis and many years of stagflation (Gronicki & Hausner 2019).

For many years, Poland's public finance has been characterized by an excessive deficit and an excessive level of public debt in relation to the GDP, too close to the constitutional threshold of 60% (instead of below 40%, as is the case in the Czech Republic). In years characterized by rapid economic growth, for example in the period of 2017–2019, Poland should have reported a substantial budget surplus, while in fact it recorded a deficit.

In this respect, Poland differs from most of the EU countries. We owe the relatively comfortable situation in public finance in the period 2017–2019 chiefly to the “positive shocks” described above, several considerable one-off revenues to the state budget, and the government's withdrawal from several campaign promises.

In the coming years, we will witness two important changes. First is a significant reduction in the trend rate of per capita economic growth, resulting in an end of the catching-up process. Second is a growing pressure towards the worsening of the state of public finances for reasons related to a drop in the pace of GDP growth and the promised considerable growth in spending on social transfers, health care, national defence, environmental protection, and the pension system. According to the authors of a balanced development index, “Poland seems to be moving towards the category of emotional countries, such as Greece, with all the related dangers incoming” (Kozmiński et al. 2020). Even though this is more of a warning rather than a firm prediction, it should be taken seriously by the Polish electorate, and by Poland's intellectual and political leaders.

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Abstract: This paper studies path-breaking economic developments in Poland following the start of the systemic transformation in 1989. Three groups of countries are used for comparative analysis: those economically most advanced, those less developed but striving to catch up during the last 30–40 years, and as a subgroup of the latter, the transition economies. The paper has three objectives. The first is to show that many opinions regarding major aspects of the Polish transformation are at variance with the plain statistical facts. The second is to evaluate the pace and the extent of the progress so far in the effort to narrow the income and wealth gaps between Poland and most developed countries, particularly pre-2004 members of the European Union. The third consists of a discussion of factors which are likely to impede the pace of Poland's economic development in the years to come.

Key words: Poland 1989–2019, European Union, political aspects, long term growth forecasts

JEL classification codes: O52, O57, P52

