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TRAILBLAZERS

Ukraine's Road to the EU
and What the Polish Experience Can Teach Us

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Ukraine's Road to the EU
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Introduction

Precisely a decade ago, in the cold winter of 2013–2014, Ukrainians all around the country took to the streets and squares to make an important decision about their future. President Yanukovych had just refused to sign the Association Agreement with the European Union in favor of closer ties with Russia. But the Ukrainians wanted to be in Europe, and if it took a revolution and a war, they were prepared to face them.

Today, Ukraine is officially an EU candidate and reforming at a rapid pace. In this volume, we take a look at Poland's own road to the EU in a humble attempt to draw out lessons that may be of value to Ukraine. Of course, Poland's situation in the 1990s and 2000s was vastly different than Ukraine's situation is today. For one, we are comparing a country that had the benefit of long standing peace to a country that is waging a defensive war against a terrorist state and one the world's largest militaries. Indeed, we are crisscrossing between two eras of global order: the historical thaw of the late 20th century and the return of conflagrations today. These facts only underscore how daring and unprecedented Ukraine's effort is.

But the EU itself has also changed, as especially the chapters *Aligning Climate and Energy Policies* and *Environmental Protection* demonstrate. The EU that Poland was joining was primarily a community of rules; the EU that Ukraine is joining is also increasingly a community of policies. We cover both these dimensions in our report, and we highlight some contrasts between them in the first chapter, *Changing the Rules of the Game: Institutional Reform and EU Accession*. Throughout the report, we emphasize the importance of healthy institutions to the well being of citizens and the success of any policy.

Despite the pronounced differences in the EU's environment externally and its operation internally, we believe there are still valuable lessons that the Poles can share with their Ukrainian partners and friends. For one, the Polish experience shows that EU accession is only one part of EU integration. Many gains from the integration occur before the actual accession takes place, and many challenges continue, or emerge, thereafter. For this reason, our analysis does not only cover the timeframe immediately before and immediately after the Polish accession to the EU but accounts for all relevant developments from the early 1990s until today.

Among others, we try to expose presumptions that were taken for granted during the negotiations with the EU but which later proved myopic as the circumstances evolved. Such decisions may have seemed only natural at the time of taking but turned out problematic in the long run, putting Poland on a path of dependence which in many cases continues until today. For Ukraine to tackle such risks, a strategic outlook and wide ranging consultations with divers social actors will both be indispensable.

Relatedly, we also emphasize the role of factors which are often called *soft* but which can make all the difference in the process of reformation. Political will and social awareness are no less necessary than expert knowledge and available funding, as Poland's story clearly demonstrates. Decisions that are problematic politically will only be growing even more so, if not taken soon enough. Nor can any reform be successfully completed unless citizens concur with it and have at least a rough understanding of it.

We hope that these pages will contribute, if only a little, to the cause which Ukrainian citizens have been pursuing so bravely. It is to them that we dedicate this volume.

Editor & Team

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CHANGING THE RULES OF THE GAME

Institutional Reform and EU Accession of Poland and Ukraine

Krzysztof Głowacki

Summary

- EU integration and membership can be viewed from two complementary perspectives. On the one hand, various social actors—individuals, companies, civil society, decision makers—engage in a sort of a game, pursuing their personal, professional, and public objectives. On the other hand, in playing the social game, the actors observe certain rules, including high level laws, constitutional limits, and social norms. While these rules, known as institutions, are often taken for granted, they effectively determine whatever, in a general outline, goes on in society.

- In particular, inclusive institutions help generate value by supporting optimal allocation of resources and reducing transaction costs. These technical terms are to be understood in a very broad sense, not limited to the exchange of conventional goods on the market but comprising any form of interaction between the social actors. The EU's very rationale is to create a level playing field of inclusive rules for its Member States. In reforming their institutions in this direction, prospective MSs can benefit immensely even before the actual accession takes place.

- In 1989, Poland's institutional order was in dire need of reformation. Combining central planning and party autocracy, the existing institutions extracted value from society instead of helping create it. The chance to follow one's talents, the prospects of finding business partners, the discipline of the political representatives were very limited. The economy was devastated by decades of resource misallocation, with virtually no market and almost no entrepreneurship, aside from the black market and illegal entrepreneurship.

- Following the transfer of power, an institutional revolution immediately began. A package of priority reforms dubbed shock therapy included restoration of two crucial institutions: freedom of enterprise, to unlock the human potential, and freedom of prices, to coordinate the resulting social exchange. Other key reforms included restoration of independent central banking (to protect money as a reliable yardstick of exchange), competition law (to ensure fair play of the exchange), and independent judiciary (to ensure compliance with the rules).

- In 2015, an institutional counter revolution began. The post 1989 institutional order was partly dismantled, especially in the areas of the judiciary, checks and balances, and legal certainty. These events, which involved violations of existing law, show that good institutions are not given once and for all but are subject to social contestation on the one hand and political manipulation on the other. Because institutions rely on public mood and civic awareness, decision makers and civil society should place social dialogue concerning the various possible institutional arrangements very high on their agenda.

- On the positive side, Poland's example shows that dire material conditions are not prohibitive to institutional progress provided that there is a wide social purchase on the reforms and a strong political will to see them through.

- Instead of targeting any specific goals, institutions provide social actors with a toolbox to pursue them. No social problem can therefore be successfully addressed until appropriate institutions have been set in place. For these reasons, institutional reform should never be compromised in favor of any ad hoc policies, however urgent they may seem.

- Institutions matter. In the Polish case, institutional reform turned a pariah of a country into a serious European contender within less than a generation. Institutional erosion of the recent years, in contrast, largely reversed that status, including within the EU.

1. Institutions, or the Rules of the Social Game

The process of EU integration and membership can be viewed from two complementary perspectives. On the one hand, social actors—individuals, companies, civil society, and decision makers of the (prospective) MSs—engage in a sort of a game. In this game, every actor pursues their own objectives, often in competition with other actors like them. Individuals follow their career and life goals; companies hire, sell, and invest; NGOs campaign for their causes; decision makers discharge their mandates—devise strategies, implement policies, seek financing. The EU improves the prospects of all these players by bolstering their efforts in various ways. Citizens, companies, and NGOs benefit from a spectrum of dedicated programs to guide their actions, while decision makers gain access to advanced policy designs. The former and the latter alike also get hold of funding to finance their projects.

On the other hand, in playing the social game, social actors observe certain rules. Citizens adjust their conduct to relevant legal and social norms, companies and NGOs comply with often meticulous labor, market, and reporting regulations, and decision makers keep their discretion within the bounds of constitutional checks and balances. Again, the EU improves the prospects across the board, but this time nobody's efforts are bolstered. Instead, the possibilities are: citizens gain access to international career, education, and social opportunities; companies expand and source abroad; and NGOs spread their word across borders. Decision makers see the checks and balances tightened still more—but so do their political opponents, with a long term benefit for all. The way the EU does all that is by improving the rules of the game within its (prospective) MSs and harmonizing these rules across them.

Institutions are the rules of the social game. The EU profoundly transforms them.

Of these two perspectives—that of the game and that of its rules—it is the former that usually catches the attention of the onlooker, whether expert or not. It is the game, after all, which has concrete actors perform specific actions to attain relevant objectives. What is often taken for granted, however, is that it is the rules that define that game and put it in motion in the first place. The chance to follow one's talents, the prospects of finding suitable partners, the conduct of political representatives—are all a matter of rules, which EU membership deeply transforms.

In literature, rules or norms like this are usually referred to as *institutions,* understood in a broad sense —less as offices and staffs than as boundary conditions on the actions of social players.[1] Invisible price tags attached to activities and behaviors, rules effectively give rise to whatever, in a general outline, goes on in society. Indeed, the pricing of various actions based on their social desirability is the primary logic behind legislative work, and the question of how best to incentivize players toward some actions and disincentivize them from others is key to institutional reform.

1 A seminal definition is due to the Nobel laureate Dougles North, who calls them *humanly designed constraints on human action* (1991).

Depending on the quality of institutions—which can be scaled between inclusive on the one hand and *extractive* on the other[2] —the results will be more or less desirable. In a Communist Poland or a Communist Ukraine, for instance, the institution of party autocracy gave shape to governments that extracted value from society rather than helping create it. The institution of central planning gave shape to companies that curried favor with the government rather than with the consumer. Both gave rise to citizens that could hardly pursue their life goals.

Good institutions conduce to optimal allocation of resources and reduce transaction costs.

Instead, good institutions advance social life in two related ways. First, good institutions conduce to *optimal allocation of resources*. For example, the four freedoms of the EU Single Market—by enabling transborder movement of capital, goods, services, and people—greatly increase the chances for the players to match their needs and opportunities. In the same vein, competitions help select the best candidate for the job or the best project to finance, whether in public administration or business, and are, accordingly, the primary method of staffing and financing decisions in the EU.

In contrast, bad institutions squander society's resources. For instance, overregulation and red tape obstruct or prevent some players from bringing their offer to the table. Corruption and lack of transparency, in turn, mean that resources are reaped by a select few rather than put to social use. And for the same reason—that is, to prevent appropriation of power and resources—checks on, and balances between, government units are indispensable in liberal democracies. Here lies the crux of the principal liberal institution, the rule of law, which insulates the rules of the game from the game itself. This prevents any player, including decision makers, from using the latter to undermine the former.

Second, good institutions reduce transaction costs. While consensual transactions are by definition net beneficial to the parties, they do entail certain costs above and beyond their object itself. Identifying deals, striking them, and seeing them through do not come free of charge. For example, it may be mutually beneficial to trade, but a trading partner must first be found, the terms of trade agreed, the contract monitored. Likewise, landing a rewarding job, getting quality education, or simply mixing with other members of society require finding out whether, and in what ways, the organization or person we are dealing with can be a good match for us. Indeed, transactions and transaction costs are to be understood in a very broad sense, not limited to the exchange of conventional goods on the market.

2 Cf. Acemoğlu et al. (2005).

Transaction costs are sometimes so high that the underlying deals, while profitable per se, will simply not happen. If properly designed, institutions prevent this. For instance, price signals combine the best knowledge of all the market participants to provide reliable, summary information about the market offer. For this reason, it is much cheaper to find a relevant buyer or seller under a market regime than it is under central planning. And the fewer barriers to trade remain—as under the EU Common Market—the cheaper it becomes.

Institutions lubricate the clockwork of social life, allowing each part to operate to the best of its abilities.

In 1989, Poland's institutional clockwork was badly jammed.

Likewise, it is much cheaper to deal and to invest if there are developed contract law and property rights, with reliable courts of law to execute them. Again, the same principle applies to other areas of social life. For instance, an NGO will incur a lower transaction cost of realizing its mission if the government conducts credible social consultations, leaving space for stakeholders to engage. And the clearer and stabler the rules (legal certainty), the higher the costs savings.[3]

Institutions, as it were, lubricate the clockwork of social life, allowing each part to operate to the best of its abilities. In 1989's Poland, that clockwork was badly jammed.

2. Poland After 1989: An Institutional Revolution

2.1. The Old Regime

After Poland became the first nation to cast off the Soviet yoke that stifled its society and its economy for nearly half a century, the country faced a myriad of difficult challenges. Under the old regime, the principal institution had been the government's arbitrary power—the opposite of the rule of law. Accordingly, only one branch of the government had existed—the executive. A single organization—the Polish United Workers' Party (Polska Zjednoczona Partia Robotnicza)—had controlled the whole of social life, from the faux Parliament down to individual souls. The judiciary had taken orders from Party officials and was confined to select areas, which did not include the economy.

The economy itself, run by planning boards, was devastated by decades of misallocation and attempts to kick start it with foreign debt. In 1989, inflation stood at 640%, budget deficit at 7.4%,[4] and there was a severe shortage of goods, with shop shelves all but empty. There was virtually no market, aside from the black one, and little (legal) entrepreneurship or private ownership. The latter was concentrated mainly in agriculture, which had luckily resisted Stalin's attempts at collectivization in the 1950s.

3 For standard references in the transaction cost theory, see work by Coase (notably, 1937) and Williamson (notably, 1981).
4 Balcerowicz (1997).

Added to all that, extra legal patterns of social behavior—so called informal institutions—had been warped by the harsh realities of the Communist era and were now governed by social connections, shrouded in shadow economy and steeped in corruption both petty and grand. It was a big unknown in the early 1990s what would become of Poland and other nearby states sharing its fate. To many observers both at home and abroad, the challenges appeared unsurmountable, and certainly not to be overcome within a span of years. Would the reborn nations reform and join the Club? Or would they falter and fail? [5]

The institutional challenge facing Poland in 1989 could be summarized as a double transformation: from autocracy to democracy and from central planning to market. But a simple distinction into a political and an economic domain might at best be a mnemonic. For in order to function, the market requires the right institutions – such as independent central banking and judiciary – and these are always a matter of political choice. Democracy, on the other hand, must take into account the many social trade offs of the decisions made, the detection of which is a strictly economic exercise. Indeed, the examples of countries that attempted to unlock their economies without developing the right institutions (like Russia) or those that ran their democracies with little heed to the trade offs (like some EU MSs) show how deeply the two dimensions are mutually embedded.

2.2. The Revolution Begins

The interdependence of what usually goes by the labels economic and political was recognized at the very outset of the Polish transformation. The earliest reforms spanned from economic freedom to the judiciary, and it was actually the Communists who began them in the 1980s. While doctrinal constraints meant that these reforms had been too modest to make a real change, they took into account social postulates and set the direction of further reforms. As the social pressure was growing, the material hardship deepening, and the international dynamics taking a turn, the famous Round Table *(Okrągły Stół)* was eventually held between the waning Communist government and the surging Solidarity movement.

Following a peaceful transfer of power, the so called *shock therapy (terapia szokowa),* an early package of priority reforms, began. Led by Minister of Economy and Vice Prime Minister Prof. Leszek Balcerowicz, it rested on three pillars: *macroeconomic stabilization, microeconomic liberalization, and institutional reconstruction (stabilizacja makroekonomiczna, liberalizacja mikroekonomiczna, przebudowa instytucjonalna).*[6] While the shock therapy was prepared in collaboration with an international team of experts led by Prof. Jeffrey Sachs of Harvard University, its thorough scope and rapid pace were something that had never been attempted before. It was that thoroughness and rapidity, however, that lay at its very core, earning it its name and setting Poland apart from other post Communist reformers.

5 The uncertainty seeps through the economic and political literature of the day. See, for instance, Bielecki (1992), Fischer & Gelb (1991), and Sachs & Lipton (1990).
6 Balcerowicz (1997).

The *shock therapy* notably involved restoration of freedom of enterprise, abolition of price controls, and establishment of several specialized institutions—which continued under later reforms. Economic freedom released the previously dormant deposits of human capital, allowing talents and ideas to be exchanged again and bringing the number of enterprises to over 2 million by the mid 1990s.[7] But that activity would not have been possible without the prices, which again became pieces of information on the relative desirability of goods in society rather than the planners' ideas about it.

Poland's institutional reform was about creating a level playing field for all social actors.

To protect that special type of information expressed in monetary terms, the independence of the central bank, the National Bank of Poland *(Narodowy Bank Polski),* was restored between 1989 and 1990. By keeping the value of the currency—after a denomination in 1995, the new Polish złoty, or PLN—approximately constant, the Bank ensures a common unit of transacting, allowing the agents to plan, enter, and monitor deals. In contrast to the previous system, the central Bank is no longer involved in supplying enterprises with capital. The central bank, in other words, no longer partakes in the game of economy but has moved fully on the side of its rules. Instead, private banks have emerged as capital suppliers, equipped with easier access to market data and better-suited incentives.

Another specialized institution, or a specialized market to connect capital seekers with opportunity seekers, is the Warsaw Stock Exchange. Located, with a pinch of wry symbolism, in the Communist Party's old headquarters, it began operation in 1991 and counts among the region's largest today. A year earlier, the Antimonopoly Office *(Urząd Antymonopolowy)*[8] was established, crucial both for the domestic market and for the EU's Common Market that Poland was later to join. The old Economic Arbitration Committee *(Państwowy Arbitraż Gospodarczy)* was abolished as state authority in the area of economy—and others—was being transferred from the executive to the judiciary.

The judiciary, accordingly, was thoroughly overhauled: its independence restored, self government granted, a new hierarchy established. From now on, the Constitution forbade judges to be removed from office, and a newly formed National Council of the Judiciary *(Krajowa Rada Sądownictwa),* run mostly by judges themselves,[9] was to recommend new judges for office. The extended hierarchy, now made up of three, rather than two, tiers of courts, improved access to justice and enabled the Supreme Court *(Sąd Najwyższy)* to concentrate on maintaining overall judicatory consistency, among other specialized tasks.[10]

7 Główny Urząd Statystyczny (2014).
8 Since 1996, Office for Competition and Consumer Protection (Urząd Ochrony Konkurencji i Konsumentów).
9 Out of 25 members, at least 17 are judges.
10 Barańska Małuszek (2022); Królak (2012).

The administrative branch of the judiciary—one closely involved with the control of state organs—was revived under a two tier hierarchy. It had existed in Poland before the war and, and while the Communists had little use for it, it was them who eventually began bringing it back. They have also left behind the Constitutional Tribunal *(Trybunał Konstytucyjny)*. An organ of judicial review, it is roughly the equivalent of Germany's *Bundesverfassungsgericht* or the US' Supreme Court, providing an ultimate check on the legislature. To be sure, by allowing unelected officials to override the decisions of elected ones, judicial review generates a degree of controversy. It is not required by EU law—for instance, the Dutch legal order does not feature it. Its democratic deficit, however, is compensated by its balancing, stabilizing effect.

With the re-establishment of an independent judiciary, the citizens have gained access to a critical service to rely on in their individual walks of life. This has massively reduced the citizens' costs of striking mutually beneficial deals with one another—that is, simply of living together in society. The tool they were handed also offers protection against the state itself, as it involves the right of appeal from administrative decision—and, owing to the judiciary's multi tier structure, from judicial decision, too. In this way, the power of the state is checked and balanced, prohibiting any actor from concentrating too much influence at the expense of other actors.

The central government is also balanced by local governments, restored in two reforms of 1990 and 1999. Their logic of subsidiarity is the same that applies between the EU and its MSs. Smaller units make better use of local knowledge—for example, local governments typically know more about the geographic conditions and social needs in their area, allowing them to better tailor policy. Also, the smaller scale allows for a tighter alignment of incentives between the decision makers and the citizenry: both are part of the same community. Efficient local government has proven crucial at many junctions of Polish EU membership, not least in the management of EU funds. The reader can learn more on this point in Chapter "The Role of Local Governments in the Implementation of Public Tasks in Poland and the Experience of the Local Government Sector Related to Poland's Accession to the EU", which elaborates on the challenges of reforming local governments in the context of joining the EU.

Several other institutions were established as additional checks and balances on incumbent power. One of them is the Supreme Audit Office *(Najwyższa Izba Kontroli)*. Harking back to a similar organ in pre war Poland, its role is to monitor the performance of government units and the central bank against the criteria of legality, economy, efficacy, and diligence. [11] To some extent, the Office may also control local government units and any actors that are entrusted with public funds. In its internal operation, the Office follows the principle of collegiality *(kolegialność)*, which increases transparency and conduces to the flow of information. Between 2008 and 2011, the President of the Supreme Audit Office also presided over the European Organization of Supreme Audit Institutions, which Poland had co established in 1990.[12]

Another specialized institution—and another one introduced by the end stage Communists (1987)—is the ombudsman, known as the Commissioner for Human Rights *(Rzecznik Praw Obywatelskich)* in Poland.[13] The Commissioner engages in a broad range of interventions, some examples of which involve data protection, freedom of assembly, and patients' rights.

11 The institution of the Office is defined in Art. 202–207 of the Constitution.
12 Najwyższa Izba Kontroli (2008).
13 The institution of the Commissioner is defined in Art. 208–212 of the Constitution.

While the reforms outlined above had a largely civil flavor, urgent action also proved necessary in the criminal department. As the state was reorganizing itself, so were its law enforcement services, including the so called Citizens' Militia (Milicja Obywatelska), which became the Police (Policja) in 1990. The enforcement services had been used by the Communists to oppress the citizenry and were compromised, therefore a reform was needed. But a degree of power vacuum arose in the process, and organized crime became a serious social problem in the 1990s The Polish mob, concentrated around the capital and collaborating with its counterparts in the East, specialized in protection racketing, illicit dealing in alcohol and tobacco (both through manufacture and smuggling), and car theft. Those activities meant that social resources were put to non productive uses as the costs of running a business or simply living a life increased, including through uncertainty. The mafia was also doing damage to the State Treasury and hurting the country's image abroad, for instance in Germany, a frequent target of its raids.

The hydra of organized crime was eventually defeated, and instrumental to this was the institution of the state witness (świadek koronny), introduced in a new Criminal Code from 1997. In exchange for crucial information on his or her criminal organization, a state witness is granted legal immunity and protection, which may involve a change of identity and residence. In addition, specialized units were created to combat organized crime. Initially, many relied on the local knowledge and initiative of provincial police headquarters, for instance the Antygang units in Bydgoszcz and Kraków. Eventually, these spontaneous efforts and experiences culminated in the establishment of the Central Investigation Bureau (Centralne Biuro Śledcze) in 2000..[14]

Similar logic was applied in combating corruption, a particularly corrosive phenomenon that squanders social resources and increases transaction costs. Specifically, a liability waiver was granted to anyone who notifies the authorities of bribery committed by a public official. And to prevent corruption among the judiciary, the Constitution granted judges, as the only job category, remuneration consistent with the dignity of their office.[16]

Some of the institutions just described may raise eyebrows with regard to their fairness. To pardon serious offenders or to reward one category of key officials over other such categories does not seem justified on the standards of conventional morality. Instead, these mechanisms follow economic reasoning to align the incentives and disincentives of the actors with outcomes that are socially desirable in the long run. These institutions discourage fraudulent activities by increasing their relative cost and decreasing their relative benefit in ways that take into account the rationale of the individual (which, as a matter of fact, need not be governed by fairness).

In May 2004, Poland joined the EU. At this point, the country was a liberal democracy with a market based economy under the rule of law. Driven by a robust institutional clockwork, the Polish society clicked and connected with its European peers, for the first time in a very long while. In the process, the nation also recorded a steep increase across a number of development measures, a trend that was to continue in the following years. For instance, Poland's GDP tripled over the 30 years between 1990 and 2020,[17] and its Human Development Index grew by 22.3% over the same period.[18] This rather strong performance would not have been possible had it not been for the profound reorganization of the rules of the social game, as the logic outlined above suggests and empirical evidence bears out.[19]

14 For more on how organized crime was combatted in Poland in the 1990s, see for instance Misiuk (2014) and Wasielewski (2018).
15 Art. 229 §6 and Art. 230a §3.
16 Art. 178 of the Constitution.
17 World Bank (2023).
18 United Nations Development Programme (2023). To compare, the increase in the region of Europe and Central Asia over the same period amounted to 19.9%.
19 E.g. Głowacki et al. (2021), Hartwell (2016), Tridico (2006).

2.3. Afterthoughts, Aftereffects

In any grand program of reform, technical knowledge and sufficient funding are usually quoted as the main prerequisites, while social acceptance and political will, impossible to measure, are dismissed as anecdotal. But the most important factor during the transformation might well have been the Polish society: open to change and anxious to see their country develop.[20] The decision makers readily capitalized on that constitutional moment to implement the reforms, which were often socially demanding.

That path traces back to the dark days of Communist oppression and international isolation. Many of the reforms began as Solidarity's political postulates, and ultimately as social expectations. Some of the reforms, including in economic freedom and in the judiciary, were tentatively begun under social pressure by the Communists themselves. Some institutions had forerunners in Poland's previous stints in statehood—the central bank, the stock exchange, the judiciary, and the Supreme Audit Office. Albeit distant and imperfect, they survived in collective memory, allowing the new reformers to rediscover the right tracks rather than having to build them from scratch.

The earliest reforms were not carried out specifically with the purpose of joining the EU. In the early 1990s, with acute poverty haunting the populace and Soviet troops still on Polish soil, that prospect was still in the realm of hypothesis. But the prospect of one day joining, or rejoining, the European and Atlantic communities built around the EU and NATO, quickly became an additional incentive to reform. In a way, EU's greatest benefits for Poland were reaped long before the accession itself became a fact.

As the structure of the economy was shifting from less to more productive uses of resources, its overall efficiency was on the rise, but the distributional effects varied greatly between industries, companies, and jobs. Unemployment surged as job guarantees were lifted, while many workers were finding the new reality daunting. The new institutions revealed the opportunity where it was, and not where the enlightened absolutists would have it. But because opportunity is typically rather loosely correlated with social notions of merit, and because material satisfaction is driven more by relative than by absolute terms,[21] these impersonal dynamics felt very personal indeed. Moreover, the new institutions also unlocked the human capital, restoring social variation and adding to the inequality.

As a result, the early reforms quickly generated sways of social discontent, and the constitutional moment vanished as quickly as it had appeared. The post Solidarity government was ousted as early as 1994, replaced by a post Communist faction. While this was an insubstantial cost in the long run, it does testify to the political risks that the reformers incur—which, perhaps, can only be compensated by historical recognition. Tellingly, the shock therapy and its authors enjoy worldwide renown as specimens of a successful transformation, but they are still the subject of much controversy in Poland. The resentment might well have contributed to the backlash that was later to come.

20 Cf. Hordiichuk (2020).
21 Two related phenomena can be named here: preference drift, or the dependence of material satisfaction on the passage of time, and reference drift, or the dependence of material satisfaction on the material status of others. See Kapteyn (1978)..

2.4. An Institutional Evolution

In contrast to many other areas, institutional reform had been all but complete by the time Poland joined the EU. This was to be expected, given the logic of institutions as the rules of the game, which must be put in place before a new round of the game begins. But there was still room for institutional improvement, while the evolving circumstances meant there was also a need for institutional adjustment.

An institutional revolution became an institutional evolution after Poland joined the EU in 2004.

On the side of the improvement, the Central Anti Corruption Bureau (Centralne Biuro Antykorupcyjne), a special force dedicated to tackling corruption, was established in 2006. In 2008, a new Act on Civil Servants was adopted, which extended the playing field by allowing for the employment of foreign EU nationals in the Polish public administration. In 2010, the office of the Minister of Justice and that of the Prosecutor General (prokurator generalny), previously combined, were separated in order to provide a further check on incumbent power. Prosecutor General was now to be selected by the President from two candidates, one recommended by the National Council of the Judiciary and the other by the National Council of Prosecutors.

On the side of the adjustment, Poland's clout was growing, and its international status was shifting from net emigrant to net immigrant. This called for measures that can be seen as policies, but which actually have a wider, institutional aspect to them, being effectively extensions of the social contract. Specifically, new players were admitted to the job market, especially from Eastern Partnership countries, including Ukraine. After Russia's full scale invasion on Ukraine, this logic was extended by including Ukraine nationals under the Polish system of education and health care.

In 2014, a former Polish Prime Minister became the President of the European Council, symbolically crowning Poland's road to Europe. Poland's progress also found its reflection in various indices of institutional performance. For instance, the country came 21st out of 102 countries in the World Justice Project's Rule of Law Index 2015, scoring particularly high on Constraints on Government Powers and ranking ahead of countries like Italy, Portugal, and Spain.[22] Poland also did fairly well in the Heritage Foundation's 2015 Index of Economic Freedom (42nd out of 178 countries),[23] World Bank's Doing Business 2015 (32nd out of 189 countries),[24] and Transparency International's Corruption Perceptions Index 2015 (29th out of 167 countries).[25]

22 World Justice Project (2015).
23 Heritage Foundation (2015).
24 World Bank (2014).
25 Transparency International (2016).

Some important results were never fully achieved.

Unfortunately, some important results were never fully achieved. The performance of the judiciary has been marked by delays,[26] and criminal courts have been abusing the mechanism of temporary detention *(areszt tymczasowy)*.[27] Competition for public posts has shown much room for improvement.[28] Poland's treatment of non citizens has been subpar,[29] and the country has no real strategy for managing immigration, a powerful factor that is apt to affect, or even durably alter, the character of the social game as played so far. For what such a strategy could involve, the reader can consult WiseEuropa's dedicated report Hospitable Poland 2022+.[30]

2.5. The Counter Revolution Arrives

As mentioned, the overall urgency to reform was decreasing over time—but the situation changed in 2015. Since then, institutions have been in the spotlight again, although this time in a destructive rather in a constructive fashion. Having secured power in both the Presidential and Parliamentary elections, one political faction quickly began to undermine the existing arrangements. By negating national and individual achievements of the transformation, or portraying them as results of fraud, these reactionaries played on social resentment and were able to sustain popular support. Combining measures that were lawful with measures that were unlawful or that were lawful but against the custom, they did serious harm to the still nascent political culture. Their efforts included violations of the Constitution, EU acquis, court verdicts—national and EU alike—and involved elements of state capture.

In 2015, an institutional counter-revolution started, and the Polish institutions began to erode.

First, the Parliament unlawfully staffed the Constitutional Tribunal with several judges in place of those who had already been elected but whom the President refused to swear in—a ceremonial yet indispensable element of the procedure. An attempt to restore the constitutional order came from the Constitutional Tribunal itself but was crudely disarmed when the Prime Minister simply refused to publish the ruling in the official monitor, withholding its promulgation. To reiterate, neither the Prime Minister nor the President's refusal to act was in any correspondence with the logic of existing law, catching other social actors quite off guard. Further violations followed, including an unlawful election of a new President of the Tribunal. As a result, this vital organ of the judiciary was paralyzed, becoming the government's façade and leaving the Parliament unchecked.[31] The European Court of Human Rights—the judiciary organ of the Council of Europe—ruled that the Tribunal ceased to be a court as a result of the illegal changes, but the Polish decision makers simply ignored the verdict.[32]

26 Pietryka (2015).
27 Klepczyński et al. (2019); Kładoczny (2023).
28 Makowski (2019).
29 Najwyższa Izba Kontroli (2019).
30 Bukowski and Duszczyk (2022)
31 For more on the erosion of the Constitutional Tribunal, see for instance Matczak & Zalasiński (2019) and Wolny & Szuleka (2021).
32 For more on the role of the European Court of Human Rights in the crisis around the Constitutional Tribunal, see for instance Kocjan (2023).

And the attempts to subdue the judiciary did not end there. Between 2017 and 2018, the Parliament altered the staffing system of the Supreme Court and established a new disciplinary unit within it, with both amendments at odds with the Constitution.[33] In 2018, the Parliament's lower chamber staffed the National Council of the Judiciary with 19 members from a total 25, while the law allowed it to staff only four.[34] And because the Council is the body which recommends new judges, the takeover had a ripple effect for the common courts, which in many cases could no longer be considered lawfully staffed. To make things worse, in 2017 the Minister of Justice secured the right to nominate the common courts' presidents—and quickly began to execute it.[35] The changes in the judiciary fractured the institutional reality in two: one legal, defended by a portion of the legal profession and other actors, and another factual, governed by political will and feeding on professional or social indifference.

In other areas of institutional realm, too, power was concentrated, checks and balances lifted or disarmed. The Minister of Justice was once again granted the competences of the Prosecutor General, and these were in addition substantially increased to enable central steering of the proceedings. Poland also refused to join the newly created (2017) European Public Prosecutor's Office.[36] Law enforcement services, previously renowned for tackling organized crime, have returned to political service.[37]

In a renewed wave of centralization, local governments were suppressed: their funding and operations partly curtailed, partly subjected to approval from above. Some of local governments' traditional competences were taken over by newly created government agencies—for instance water management and supply by Polish Waters (Wody Polskie). The amount of draft legislation not consulted by the central government with local governments increased by four between 2014 and 2021.[38]

Many more areas were affected: the Parliament (including through unjustified fast tracking and limited participation of stakeholders and experts),[39] central banking (whose independence was called into question),[40] education (including through increased Ministerial control), [41] public media (including through unconstitutional staffing),[42] and others. Indeed, hardly an area of social life was left unscathed by the institutional erosion. As discretion was displacing law, legal certainty decreased, and transaction costs increased. As the institutions were changing from inclusive to extractive, allocation of resources worsened.[43]

The institutional erosion was noticed by international observers, harming Poland's prestige. In particular, the Venice Commission—an advisory body of the Council of Europe—has declared that Poland had violated the independence of the judiciary and the principle of the separation of powers. Still more urgently, the European Commission has initiated countervailing measures

33 For more on the erosion of the Supreme Court, see for instance Ejchart-Dubois (2018) and Kalisz et al. (2021).
34 For more on the erosion of the National Council of the Judiciary, see for instance Bojarski (2019) and Szuleka et al. (2023b).
35 Grabowska Moroz, B. & Szuleka, M. (2018). For more on the erosion of the common courts, see for instance Czaja (2019), Kalisz & Szuleka (2023), and Szuleka et al. (2019).
36 For more on the erosion of the Prosecutor General in Poland, see for instance Wolny et al. (2022).
37 Amnesty International (2022); Izdebski (2022).
38 Lackowska et al. (2023). For more on the attempts at re-centralization, see for instance Sześciło (2018).
39 Berek et al. (2023).
40 Zieliński & Wachowiec (2023).
41 Lackowska et al. (2023); Marczewski (2019).
42 Ananicz (2021).
43 For more on the social effects of the erosion of the rule of law in Poland, see for instance Głowacki et al. (2021) and Szuleka et al. (2023a).

against Poland, including the so called *infringement procedure*[44] as well as the procedure under Article 7 of the Treaty on European Union.[45] The latter marked the first occasion that this EU mechanism of protecting the rule of law had ever been put to use (although it was soon to be followed by Hungary). The Commission has also withheld payouts from the post COVID 19 NextGenerationEU recovery fund for Poland subject to reversing the unlawful changes. The breaches were also reflected in the international indices of institutional performance. Between 2015 and 2021, for instance, Poland recorded the largest drop in the World Justice Project's Constraints on Government Powers measure from all 126 countries surveyed worldwide.[46]

After many years of strong institutional performance and widely regarded as an EU success story, Poland belatedly proved right those who had been skeptical about the enlargement in the first place. In 2004, when Poland and nine other countries were joining the EU, those skeptics doubted whether the new nations were fully prepared for the commitment. Indeed, the Polish experience shows that good institutions can be quickly assembled, but equally quickly disassembled if they are not socially embedded to a sufficient degree.[47] Poland, whose troubled history made for a difficult relationship with rules, is still learning along the way.[48]

2. Take-Aways for Ukraine

The first and foremost take away for Ukraine is this: institutions matter.[49] In the Polish case, institutional reform turned a pariah of a country into a serious European contender within less than a generation. The importance of institutions is of a rather special kind. Instead of targeting any specific goals, they provide social actors with a toolbox to pursue them. Of all the areas of legislation, institutions are horizontal in the fullest sense: they cut across areas and determine the boundary conditions of any policy. No social problem can therefore be successfully addressed until appropriate institutions have first been set in place. For these reasons, institutional reform should never be compromised in favor of any ad hoc adjustments, however urgent they may seem

Institutional reform is a priority, but it is also notoriously difficult.

While institutional reform extends over a great many essential elements, the judiciary may perhaps deserve a special mention. Comprised of professional officials, it escapes electoral undulations and stabilizes the overall system. Independent from the legislature and the executive, it works to check and balance both. The recent events in Poland and elsewhere show that, for these very reasons, the judiciary is a prime target for aspiring autocrats and thus merits special attention.

44 European Commission (2021a).
45 European Commission (2023a).
46 World Justice Project (2019).
47 On the importance of informal institutions (like social norms) for the performance of formal institutions (like legal norms) in the Polish case, see for instance Kozenkow (2014) and Williamson (1992).
48 For more on the erosion of the rule of law in Poland, see for instance Buras et al. (2019) and Sadurski (2019). See also European Commission's (2020–2023) annual Rule of Law Reports, including the chapter submitted by Polish NGOs for the most recent edition (Citizens Network Watchdog Poland et al., 2023).
49 Cf. North (1994).

Second, institutional reform is notoriously difficult. Many countries, not least Ukraine and Poland, have learnt the challenge the hard way. In Ukraine, the initial situation largely resembled that of Poland in terms of economy, demography, and geography. What differed the most was the institutional memory the two countries inherited—a phenomenon known as institutional stickiness and being a type of path dependence. In Ukraine, deprived of its own statehood until the late 20th century, the heritage of the Soviet and Tsarist institutions likely affected the reformation.[50] More generally, the influence of informal institutions, e.g. the bundle of adverse social norms known as the homo sovieticus, has been quoted as a hindrance for post Soviet reformers.[51]

Poland, in contrast, was fortunate enough to benefit from the experience of its two former statehoods. Although one was distant and the other brief, they were enough to help the nation back onto the right institutional trail, including with regard to parliamentarism, the judiciary, and the market.[52] Even the late Communist period resulted in a number of important reforms, including in the judiciary. But Poland's institutional history had been vastly imperfect, and the reforms that built on it, while initially successful, proved far from unproblematic in the long run.

Third, and in relation to the above, institutions rely on civic awareness and are subject to public mood. Formal, legal institutions depend on their informal, social foundations. We saw earlier how the new equality of opportunity, while increasing prosperity, has also increased the inequality of outcome. This was in stark contrast to the socialist era, whose premise was to make everyone equally well off, and whose outcome was to make everyone equally broke. In today's Ukraine, the situation is different than it has been in Poland. The present inequality is still largely a fallout of the early attempts at transformation, which saw an emergence of a new class of oligarchs to the disadvantage of the wide citizenry. To a large extent, then, levelling the playing field can be expected to meet with anticipation rather than disillusionment, although some degree of the latter is also likely to emerge.

The importance of the social factor leads to two further take-aways. On the positive side, and fourth, the Polish examples shows that dire material conditions are not prohibitive to institutional progress provided that there is a wide social purchase on the reforms and that there is a strong political will to see them through. While a country struck by war can never truly be compared to one that is spared by it, Poland's devastated economy of 1989 provides a tolerable yardstick. After all, material hardship was one of the key causes—perhaps the key one—for the collapse of the Communist regime in Poland (and, soon enough, in the rest of the Soviet Bloc).

Conversely, the great driver of the Polish transformation was rather emotive in nature. The Poles felt they had been torn out of a community they had once belonged to: the community guided by individual freedom and equality before law. This ties in with the sentiment the Ukrainians have been displaying, especially since 2013. The recognition of what is at stake will continue to be a powerful incentive, though teeth be clenched and occasionally grated.

50 E.g. Hartwell (2016) and Peisakhin (2010).
51 E.g. Czachor (2014) and Novikova (2023).
52 For more on this, see for instance Hartwell (2016).

On the negative side, and fifth, good institutions are not given once and for all. Social constructs that they are, institutions are fragile and exposed to political interference. The demolition of the rule of law has wrought havoc with Poland's morale internally and its reputation externally, especially within the EU. Perhaps unexpectedly, the political party that ushered it in was not a political outsider but an established organization with ample parliamentary experience and a previous term in government already under its belt.

For the reasons stated, and sixth, decision makers and actors of civil society should invest a significant portion of their agenda, however tight, to talk to the citizens. Such communication must not be one sided but should ensure plenty opportunity for divers stakeholders to engage and contribute their unique perspectives. It should be an ongoing, open discussion on the costs and benefits of relevant institutional arrangements, whether established or considered. It should favor evidence but not neglect sentiment, and it must leave room for the contestation and renegotiation of existing arrangements.

Lastly, one should appreciate the interdependence of the dimensions usually referred to as economic and political. While it seems almost in vogue to draw a thick line between economic stakes on the one hand and a cluster of non economic stakes on the other, institutional perspective exposes the relativity of such divisions. Political considerations may establish social goals, including various visions of the common good, but economic analysis identifies the means and trade-offs that ultimately condition them. Conversely, no economic arrangement is viable in a democratic polity if it lacks social approval.

Ukrainian efforts have already resulted in notable improvements across the board. Even more important, in the long haul, will be the consolidation of the reforms, especially the harmonization of formal institutions, such as legal norms, with informal institutions, such as social norms. Institutional reform differs from other types of reform also in that it is an effort of entire society and not merely of decision makers. But the decision makers should lay the groundwork for that effort.

Ukrainians are ready to change the rules of the game.

For centuries, Ukraine's brave population has endured oppression and want. Today, Ukrainians are ready to change the rules of the game. They must only remember that after the short sprint to the golden starred flag, a long march will follow. Its course, like for Poland, is not set in stone. Institutions are notoriously sticky and can take generations to change for good. In rightly pressing the EU to up its game, Ukraine must never forget about honing the rules of its own. For the future of Ukraine is the future of Europe.

References

Acemoğlu, D., Johnson, S., & Robinson, J. (2005). *Institutions as the Fundamental Cause of Long-Run Growth.* In Aghion, P. & Durlauf, S. (eds.), Handbook of Economic Growth.
https://economics.mit.edu/sites/default/files/publications/institutions-as-the-fundamental-cause-of-long-run-.pdf

Amnesty International (2022). *The Pegasus Project: One year On, Spyware Crisis Continues After Failure to Clamp Down on Surveillance Industry.*
https://www.amnesty.org/en/latest/news/2022/07/the-pegasus-project-one-year-on-spyware-crisis-continues-after-failure-to-clamp-down-on-surveillance-industry/

Ananicz, S. *Upolitycznienie Krajowej Rady Radiofonii i Telewizji: Nowy front w konflikcie Polski z Unią Europejską o praworządność?* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/polski-bezlad-legislacyjny-raport-obywatelskiego-forum-legislacji-z-prac-ix-kadencji-sejmu/

Balcerowicz, L. (1997). *Socjalizm, kapitalizm, transformacja. Szkice z przełomu epok.* Wydawnictwo Naukowe PWN.

Barańska Małuszek, O. (2022). Dwa czy trzy szczeble polskiego sądownictwa? *In Gremio,* 161.
https://ingremio.org/2022/in-gremio-161/dwa-czy-trzy-szczeble-polskiego-sadownictwa/.

Berek, M., Frączak, P., Izdebski, K., Kopińska, G. & Wołejko, P. (2023). Polski BezŁad Legislacyjny. Raport Obywatelskiego Forum Legislacji z prac IX kadencji Sejmu. Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/polski-bezlad-legislacyjny-raport-obywatelskiego-forum-legislacji-z-prac-ix-kadencji-sejmu/.

Bielecki, J. (1992). Problems of the Polish Transformation. *Communist Economies and Economic Transformation,* 4(3), pp. 321–332.

Bojarski, Ł. (2019). *Jak przywrócić państwo prawa? Krajowa Rada Sądownictwa.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/jak-przywrocic-panstwo-prawa-krajowa-rada-sadownictwa/.

Bukowski, L. & Duszczyk, M. (2022). *Hospitable Poland 2022+. How to Wisely Support Poland and Poles in Helping People Fleeing the War in Ukraine?* WiseEuropa.
https://wise-europa.eu/en/2022/08/23/hospitable-poland-2022/.

Buras, P., Dalhuisen, J., Knaus, G. & Milenkovska, M. (2019). *Poland's Deepening Crisis. When the Rule of Law Dies in Europe.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/polands-deepening-crisis-when-the-rule-of-law-dies-in-europe/.

Citizens Network Watchdog Poland, Civil Development Forum, Free Courts Foundation, Institute of Public Affairs, Helsinki Foundation for Human Rights, Polish Federation of Non- Governmental Organisations, Batory Foundation (2023). *2023 Rule of Law Report. Targeted Stakeholder Consultation.*
https://hfhr.pl/upload/2023/02/report_2023_rule_of_law.pdf
Coase, R. (1937). The Nature of the Firm. *Economica,* 16(4), pp. 386–405.
https://onlinelibrary.wiley.com/doi/full/10.1111/j.1468-0335.1937.tb00002.x.

Constitution of the Republic of Poland (1997).
https://www.sejm.gov.pl/prawo/konst/angielski/kon1.htm.

Czachor, R. (2014). Postradziecka trauma jako bariera demokratyzacji Białorusi. *Miscellanea Posttotalitariana Wratislaviensia,* 2, pp. 355–364.
http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-d47a57e9-cc1a-45d2-841c-2055181c134e.

Czaja, J. (2019). *Jak przywrócić państwo prawa? Sądownictwo powszechne.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/jak-przywrocic-panstwo-prawa-sadownictwo-powszechne/

Ejchart Dubois, M., Gregorczyk Abram, S., Kieszkowska Knapik, P. & Wawrykiewicz, M. *Devastation of Poland's Supreme Court and Judicial Independence: The Situation Now.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/devastation-of-polands-supreme-court-and-judicial-independence-the-situation-now/.

European Commission (2021a). *Rule of Law: Commission Launches Infringement Procedure against Poland for Violations of EU Law by its Constitutional Tribunal.*
https://ec.europa.eu/commission/presscorner/detail/en/ip_21_7070.

European Commission (2023a). *Rule of Law Framework.*
https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/upholding-rule-law/rule-law/rule-law-framework_en.

European Commission (2020–2023). *Rule of Law Report [2020–2023].*
https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/upholding-rule-law/rule-law/rule-law-mechanism_en#rule-of-law-report.

Fischer, S. & Gelb, A. (1991). The Process of Socialist Economic Transformation. *Journal of Economic Perspectives.* 5(4), pp. 91–105.

Głowacki, K., Hartwell, C., Karunska, K., Kurczewski, J., Botsch, E., Göhring, T., Priesmeyer-Tkocz, W. (2021). The Rule of Law and its Social Reception as Determinants of Economic Development A Comparative Analysis of Poland and Germany. *Law and Development Review* 14(2), pp. 359–400.
https://www.eab-berlin.eu/system/files/2021-09/LDR%20Vol.%2014%2C%20No.%202%20%282021%2C%20special%20issue%29_p%20359-400.pdf.

Główny Urząd Statystyczny (2014). *Polska 1989–2014.*
https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5501/13/1/13/oz_polska_1989-2014.pdf.

Grabowska Moroz, B. & Szuleka, M. (2018). *It Starts with the Personnel. Replacement of Common Court Presidents and Vice Presidents from August 2017 to February 2018.* Helsinki Foundation for Human Rights.
https://hfhr.pl/en/publications-7798/it-starts-with-the-personnel-replacement-of-common-court-presidents-and-vice-presidents.

Hartwell, C. (2016). *Two Roads Diverge. The Transition Experience of Poland and Ukraine.* Cambridge University Press.

Heritage Foundation (2015). 2015 *Index of Economic Freedom Promoting. Economic Opportunity and Prosperity.*
https://www.heritage.org/index/pdf/2015/book/index_2015.pdf.

Hordiichuk, O. (2020). The Formation and Transformation of Poles' Mentality after 1989: An Analysis from the Perspective of Social Philosophy. *Konteksty społeczne,* 1(15), pp. 24–47.
https://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.ojs-doi-10_17951_ks_2020_8_1_24-47.
Izdebski, K. (2022). *Dokąd porwie nas Pegaz?* Helsinki Foundation for Human Rights.
https://www.batory.org.pl/blog_wpis/dokad-porwie-nas-pegaz/.

Kalisz, M. & Szuleka, M. (2023). *Disciplinary Proceedings Against Judges of Common Courts in Poland. 2022 Monitoring Report.* Helsinki Foundation for Human Rights.
https://hfhr.pl/en/publications-7798/report-disciplinary-proceedings-against-judges-of-common-courts-in-poland-.

Kalisz, M., Szuleka, M. & Wolny, M. (2021). *Sąd nad sądem. Zmiany wokół Sądu Najwyższego w latach 2017–2021.* Helsinki Foundation for Human Rights.
https://hfhr.pl/publikacje/sad-nad-sadem-zmiany-wokol-sadu-najwyzszego-w-latach-2017-2021.
Klepczyński, A., Kładoczny, P. & Wiśniewska, K. (2019). *The Trials of Pre Trial Detention. A Review of the Existing Practice of Application of Pre-Trial Detention in Poland.* Helsinki Foundation for Human Rights.
https://hfhr.pl/en/publications-7798/the-trials-of-pre-trial-detention.

Kładoczny, P. (ed.) (2023). *O standardzie, który się nie przyjął (w Polsce). Praktyka stosowania tymczasowego aresztowania w świetle przepisów Europejskiej Konwencji Praw Człowieka.* Helsinki Foundation for Human Rights.
https://hfhr.pl/publikacje/raport-praktyka-stosowania-tymczasowego-aresztowania-2023.

Kocjan, J. (2023). Znaczenie orzecznictwa Europejskiego Trybunału Praw Człowieka dla naprawy wymiaru sprawiedliwości po kryzysie praworządności w Polsce. *Europejski Przegląd Sądowy,* 12, pp. 18–24.

Kozenkow, J. (2014). Values, Norms, and Beliefs: The Case of Poland. In Benczés, I. (ed.). *Deficit and Debt in Transition. The Political Economy of Public Finances in Central and Eastern Europe,* 133–330. Corvinus University Press.

Królak, S. (2012). *Zmiany modelu ustrojowego sądów powszechnych w latach 1989–1990.*
http://www.korporacje.com/wordpress/blog/2012/07/15/zmiany-modelu-ustrojowego-sadow-powszechnych-w-latach-1989-1990/#_ftnref18.

Kwiatkowska-Moskalewicz, K. (2021). *Polska–Ukraina: Przeciwne wektory opowieści.* Batory Foundation.
https://www.batory.org.pl/publikacja/polska-ukraina-przeciwne-wektory-opowiesci/.

Lackowska, M., Matczak, R., Swianiewicz, P., Sześciło, D., Wojnar, K. (2023). *Indeks Samorządności 2023.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/indeks-samorzadnosci-1/.

Makowski, G. (2019). *Dla państwa i obywateli. Diagnoza i propozycje reformy służby cywilnej.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/dla-panstwa-i-obywateli-diagnoza-i-propozycje-reformy-sluzby-cywilnej/.

Marczewski, P. (2019). *Dziel, rządź, ignoruj. Polska szkoła po czterech latach braku polityki edukacyjnej PiS.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/dziel-rzadz-ignoruj-polska-szkola-po-czterech-latach-braku-polityki-edukacyjnej-pis/.

Matczak, M. & Zalasiński, T. (2019). *Preferowane kierunki zmian prowadzących do przywrócenia prawidłowego funkcjonowania Trybunału Konstytucyjnego.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/5717/.

Najwyższa Izba Kontroli (2008). *Kontrola Państwowa,* 319(2).
https://www.nik.gov.pl/plik/id,1733.pdf.

Najwyższa Izba Kontroli (2008). *Przygotowanie administracji publicznej do obsługi cudzoziemców.*
https://www.nik.gov.pl/aktualnosci/panstwo-niegotowe-na-cudzoziemcow.html.

North, D. (1991). *Institutions, Institutional Change and Economic Performance.* Cambridge University Press.

North, D. (1994). *Institutions Matter.*
https://ideas.repec.org/p/wpa/wuwpeh/9411004.html.

Novikova, K. (2015). Informal Networking as Effective Resource and Sociocultural Traditions of Homo Sovieticus. *Zeszyty Naukowe UwS. Seria Administracja i Zarządzanie,* 31(104), pp. 187–194.

Peisakhin, L. (2010). *Living Historical Legacies: The "Why" and "How" of Institutional Persistence: The Case of Ukraine.* Juan March Institute for Study and Research.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1666548.

Pietryka, A. (2015). *Przewlekłość jako problem strukturalny w Polsce. Analiza wyroku Rutkowski i Inni przeciwko Polsce.* Helsinki Foundation for Human Rights.
https://hfhr.pl/publikacje/przewleklosc-jako-problem-strukturalny-w-polsce.

Sachs, J. & Lipton, D. (1990). Poland's Economic Reform. *Foreign Affairs,* 69(3), pp. 47–66.

Sadurski, W. (2019). *Poland's Constitutional Breakdown.* Oxford University Press.

Sześciło, D. (2018). *Recydywa centralizmu? Zmiany w polityce państwa wobec samorządu po 2015 roku.* Stefan Batory Foundation.
https://www.batory.org.pl/publikacja/recydywa-centralizmu-zmiany-w-polityce-panstwa-wobec-samorzadu-po-2015-roku/.

Szuleka, M., Kalisz, M. & Bluett, Kristie. (2023a). *Poland: Business, Judicial Independence, and the Rule of Law.* Helsinki Foundation for Human Rights.
https://hfhr.pl/en/publications-7798/business-judicial-independence-and-the-rule-of-law.

Szuleka, M., Szwed, M. & Wolny, M. (2023b). *Powołania sędziów w latach 2018–2023 na wniosek tzw. „nowej" Krajowej Rady Sądownictwa. Analiza statystyczna.* Helsinki Foundation for Human Rights.
https://hfhr.pl/publikacje/nowa-krs-krajobraz-po-reformie.

Szuleka, M., Wolny, M. & Kalisz (2019). *The Time of Trial. How Do Changes in Justice System Affect Polish Judges?* Helsinki Foundation for Human Rights.
https://hfhr.pl/en/publications-7798/the-time-of-trial-how-do-changes-in-the-justice-system-affect-polish-judges-.

Transparency International (2016). *Corruption Perceptions Index 2015.*
https://www.transparency.org/en/publications/cpi-2015.

Tridico, P. (2006). Institutional Change and Economic Performance in Transition Economics: The Case of Poland. *European Journal of Comparative Economics,* 3(2), pp. 197–238.
http://ejce.liuc.it/18242979200602/182429792006030203.pdf.

United Nations Development Programme (2023). *All Composite Indices and Components Time Series (1990–2021).*
https://hdr.undp.org/data-center/documentation-and-downloads.

Wasielewski, S. (2018). Przestępczość zorganizowana w Polsce po 1989 r. – Pruszków i Wołomin. *Świat Idei i Polityki,* 17, pp. 310–330.
https://www.ukw.edu.pl/download/53673/Szymon_Wasielewski.pdf.

Williamson, O. (1981). The Economics of Organization: The Transaction Cost Approach. *The American Journal of Sociology* 87(3), pp. 548–577.

Williamson, O. (1992). Some Issues in the Transformation of Ownership Institutions in Poland: Comment. *Journal of Institutional and Theoretical Economics,* 148(1), pp. 69–71.

Wolny, M. & Szuleka, M. (2021). *A Tool of the Government. The Functioning of the Polish Constitutional Court in 2016–2021.* Helsinki Foundation for Human Rights.
https://hfhr.pl/upload/2022/01/a-tool-of-the-government_-the-functioning-of-the-polish-constitutional-court-in-2016-2021.pdf.

Wolny, M., Kalisz, M. & Szuleka, M. (2022). *Stan oskarżenia. Prokuratura w latach 2016–2022.* Helsinki Foundation for Human Rights.
https://hfhr.pl/publikacje/stan-oskarzenia-prokuratura-w-latach-2016-2022.

World Bank (2014). *Doing Business 2015. Going Beyond Efficiency.*
https://elibrary.worldbank.org/doi/abs/10.1596/978-1-4648-0351-2.

World Bank (2023). *World Bank Open Data.*
https://data.worldbank.org/.

World Justice Project (2015; 2019). *Rule of Law Index [2015; 2019].*
https://worldjusticeproject.org/our-work/publications/rule-law-index-reports/wjp-rule-law-index-2015-report;
https://worldjusticeproject.org/our-work/publications/rule-law-index-reports/wjp-rule-law-index-2019.

Zieliński, M. & Wachowiec, P. (2023). *National Political Bank: Guarding the Party Rather than the Currency.* Civil Development Forum.
https://for.org.pl/en/a/9402,for-communication-14/2023-national-political-bank-guarding-the-party-rather-than-the-currency.

Contents

WiseEuropa

THE ROLE OF LOCAL GOVERNMENTS

The Implementation of Public Tasks in Poland and the Experience of the Local Government Sector Related to Poland's Accession to the EU

Patryk Wild

Summary

- WThis report outlines the role of local self-governments in the EU, the principle of subsidiarity as a fundamental constitutional principle of the EU, and the main provisions arising from the European Charter of Local Self-Government.

- The second part describes the Polish experience in building self-government in the context of EU membership, the current shape of the self-government system in Poland and its evolution. Polish self-government was reconstituted in 1990 by creating the commune level. During the second stage of the reform in 1998, the second level of local self-government was created—the county—as well as regional self-governments, i.e., self-governing voivodeship.

  This section describes the various levels of local government in Poland (communes, counties and voivodeships) and their tasks, including their role in the distribution of EU aid funds, financing, size of units, and methods of electing authorities. The main strengths and weaknesses of the Polish local government system are then discussed. The main strengths include public trust in local government (especially at the municipal level) and institutional maturity.

  The main and often-criticized shortcomings of the Polish local government system are the faulty functioning of the county government, errors (resulting from political compromises) regarding the scale of some voivodeships, and the functioning of some types of municipalities, such as the so-called "bagel" municipalities. The lack of minimum standards for the implementation of some local government tasks and their inadequate financing in the distribution of public revenues were also raised.

- The third part presents recommendations for Ukraine in the context of its local and regional government reform, arising from the Polish experience. The aspect of Ukraine's future EU membership and community policies is considered.

The recommendations concern, among other things, the desirable structure of local government and, in particular, the creation of a two-tier division, i.e. local and regional government (communes and provinces), the creation of a matrix of tasks of various levels of administration, the development of mandatory standards for the implementation of public tasks, the provision of the necessary scope of autonomy and adequate financing of local government units, the introduction of democratic election of representatives of executive bodies, and the creation of mechanisms of cooperation between local governments.

The urgency of carrying out the changes was also raised to ensure that the reformed local governments would have time to prepare to perform new tasks, including those related to Ukraine's accession to the EU.

1. Introduction

This chapter outlines the role of local governments in the EU, the Polish experience in building self-government in the context of EU membership, and the main strengths and weaknesses of the Polish local government system. Stemming from the Polish political experience, the third section presents recommendations for Ukraine in the context of its local government reform in readiness for its future EU membership.

2. European policy and local governments

Local government plays a very important role in the political system of the EU and most of its member states. Since the reform of the EU Structural Funds carried out in the 1980s, one of the main principles in the design and implementation of development programs subsidized by the Community has been the partnership and participation of territorial communities.

In particular, an important role in European policies is played by regional governments, institutions that hold a significant portion of EU aid funds.

In the EU, the participation of the local government sector in the creation of regulations is guaranteed by the Committee of the Regions, which is an EU advisory body. The Committee of the Regions is composed of locally and regionally elected representatives from all 27 member states. The EC and the European Parliament are obliged to obtain the opinion of the Committee of the Regions on drafts of all legislation relating to the operation of local and regional governments and matters within their scope of action. If they fail to do so, the Committee is entitled to appeal against these acts to the EU Court of Justice.

In Poland, at the national level, a similar role to the Committee of the Regions is performed by the Government and Territorial Government Joint Commission.

2.1. The principle of subsidiarity as a fundamental constitutional principle of the EU

The principle of subsidiarity implies that each level of government should only carry out tasks that cannot be handled by a lower level of government or by its citizens, their families or organizations, or free market business entities.

This means that, in constructing the state system, the first step should be to solve problems and provide the maximum number of public services at the local level (closest to the citizens), then at the regional level, and only then at the national or community level.

In the case of public services, only those tasks that cannot be organizationally handled well at the lowest level should be assigned to higher levels of government.

The EU applies the principle of subsidiarity because it is universal for EU member states (or more broadly for states with a democratic system) and to self-limit the Community's activities to matters that cannot be dealt with effectively at the member state level.

2.2. European Charter of Local Self-Government

The Charter was adopted in 1985 as a benchmark of values that shaped the essence of self-government in Europe. It came into force in 1988. It has since been ratified—in part or in full—by all 46 Council of Europe member states.

The most important provisions under the charter are:

- the principle of subsidiarity in the organization of the state;
- democratic election by the community of local government decision making and executive bodies;
- receipt by the local government of an appropriate scope of authority and funding for the set goals;
- receipt by the local government of autonomy in the implementation of the set goals;
- guaranteeing the rights of self-government in the Constitution or relevant acts;
- limiting the scope of control over the actions of the local government to the criteria of legality and expediency (the second criterion concerns the implementation of delegated tasks).

Although the principles of the European Charter of Local Self-Government are implemented in the legal systems of EU countries, only a small number of European countries have ratified the Charter's provisions in full. Poland belongs to this group. Polish local municipal-level governments have relatively more power and authority than the corresponding local government units in a significant part of other European countries, and the Polish local government system is close to solutions considered exemplary in Europe. The undoubted success of Polish local governments should also be viewed in this context.

3. Polish local government reform and the current shape of local government in Poland

3.1. Poland's local government reform

Local municipal governments were reconstituted in Poland in 1990 after 40 years of liquidation by communist authorities. The restoration of local government was an initiative of the democratic opposition elite, which took power in the country in mid-September 1989. It was done almost immediately, as the Act on Municipal Self-Government was adopted on 9 March 1990, just a few months after the formation of Poland's first non-communist government since 1945.

Despite the enormous scale of the reform (which resulted in the amendment of 94 acts in force at the time), it was prepared within a very short time frame by a small team of authors, who took advantage of the so-called constitutional moment, i.e., the window of change that appears at the time of a political change (i.e., the collapse of communism).

Local government reform was the first of the fundamental system reforms after the overthrow of communism, and the 27 May 1990 local government elections were the first fully free elections to be held in Poland since 1945. The municipalities created then were given legal personality, legal protection of their interests and autonomy, and their own assets and sources of income. According to one of the main creators of this reform, the then-senator of the Republic of Poland Prof. Jerzy Regulski, the reform broke the five monopolies of the authoritarian state: "Free elections (to the local government) broke the political monopoly. Granting autonomy to municipalities and abolishing hierarchical subordination to voivodes abolished the monopoly of (central) power. Giving municipalities ownership of real estate broke the monopoly of property (before 1990, they only managed state property). The financial independence of the municipalities, which until now functioned within the framework of the state budget, removed the previous monopoly of public finance (centrally distributed). Finally, the transfer to local governments of employees previously hired by the state administration ended the administration's monopoly" (PAP Local Government Service, Siła reformy Samorząd złamał pięć monopoli autorytarnego państwa, 2014).

Systemic changes were absolutely fundamental to the reform of the state.

These systemic changes were absolutely fundamental to the reform of the state.

The Constitution of the Republic of Poland, adopted in 1997, implemented the main principles of the European Charter of Local Self-Government into the Polish legal system. Among other things, The Constitution guarantees local governments autonomy, legal personality, judicial protection, ownership and other property rights, the distribution of public revenues appropriate to the tasks carried out, and each change in the distribution of these public revenues in the context of a change in the scope of public tasks carried out by local governments. The Constitution empowers local governments to levy their own taxes to the extent established by the acts.

During the period of negotiation for Poland's EU membership and the parallel process of adjusting the institutions of the Polish state to EU membership, the second stage of local government reform was carried out. In particular, an additional level of local government was created, i.e., county [poviat] government (in this case, it was a reference to the county local government associations that existed in Poland before World War II, and the county administration of the First Polish-Lithuanian Commonwealth). This level of local government was introduced by the county government Act of June 5, 1998.

A new level of self-government was also established, which, being a regional government—namely, the self-governing voivodeship—was virtually non-functional before WWII. In terms of nomenclature and size, this level of local government referred to the administrative division of the Polish–Lithuanian Commonwealth (voivodeships, as a level of central administration, also existed during the Second Polish Republic and in the period after 1945). This level was created by the Act of June 5, 1998 on voivodeship self-government.

The goal declared by the authors of this reform was the deep decentralization of the state. The central government was to remain in charge of the country's economic policy and finances, foreign policy and defense, internal security, the judiciary, urban planning (at the national level), health care, and some educational and cultural tasks.

Closely linked to the local government reform were the health care and education system reforms.

Closely linked to the local government reform were the health care and education system reforms, as medical and education services were included in the respective scope of benefits at the municipal, county, and voivodeship levels.

The logic guiding the authors of the reform was to create a strong regional government consisting of 12 voivodeships, most of which would have a metropolitan center on their territory, which would be the driving force behind the development of a given region (although notable exceptions were the three regions in eastern Poland without such centers).

The number of counties being an intermediate element between regional and municipal governments was to be 200–250, and the number of cities with county rights (which are both a municipality and a county) was to be no more than 50.

The premise of the reform was that counties should be large enough to achieve financial independence so they could perform their own tasks (education, transportation and infrastructure, and social welfare) and those mandated by the government (e.g., security).

However, to a significant extent, the implementation of the reform, which was the result of parliamentary decisions and political compromises (made mainly to protect the interests of local political elites) distorted its logic, goals, and internal consistency.

As a result of the political arrangement, around 33% more voivodeships were created (16 instead of 12), and 50% more land counties (and around 33% more cities with county rights) than planned. Consequently, the resulting local government units were often significantly smaller and economically weaker than assumed when preparing the changes, with the increased burden of administrative costs. This problem particularly affected county-level government, where some of the smallest units were incapable of fulfilling all of their assigned tasks at the outset.

In 2002, the principle of the direct election of executive bodies of municipalities and cities—wójts [i.e., municipality administrative officers], town and city mayors—by residents was introduced (in place of the previous election of a collegial board by the council of a given municipality). The number of councilpersons in local governments was also slightly reduced.

3.2. The current shape of local government in Poland—the basic tasks of municipal, county and voivodeship government

Following the principle of subsidiarity, local governments carry out public tasks for which performance is facilitated by decentralization. The tasks of municipal and county governments are at the local level (education, roads and public transport, municipal services, social welfare and, to some extent, health care), while the voivodeship government carries out public tasks at the regional level (mainly in transportation and infrastructure and health care).

Under Polish political conditions, all public institutions operate under the principle of legalism, which limits their ability to act only on those that are legally permitted to them under the relevant laws. This is the opposite to the rights of citizens, who are entitled to any activity that is not prohibited by law. This way, the law safeguards against, for example, local government institutions carrying out economic activities outside the sphere of public utility, competitive to the market activities of citizens and companies (and potentially using their privileged position in this regard). However, in the case of municipal government in Poland, the law allows for a situation in which the municipal government may, through the companies it establishes, carry out economic activities for which there are local needs in a given municipality/city that are not met by the economic sector, or significant social challenges in the area, such as high unemployment. This exception was created only for the municipal government as the primary level of local government, which also operates on a local scale.

In total, Polish local governments spent nearly PLN 354 billion in 2022, of which nearly PLN 65 billion were capital expenditures. In comparison, the state budget spent PLN 517 billion in the same period, considering that PLN 125 billion in the state budget was spent on subsidies and grants to local governments. Taking into account these transfers (from the state budget to local governments), it should be noted that the value of tasks carried out by the local government sector is comparable to the value of tasks carried out by the central administration.

In addition, some of the public tasks carried out by local governments are entrusted to municipal companies, which have their own revenues and expenditures that are not included in local government budgets (e.g., water, heating, transportation companies). In practice, the value of public tasks carried out by the local government sector is even greater than what is indicated by the budgets of these units.

While treating cities with county rights as a special type of municipal government, it should be noted that 82% of the local government sector's expenditures (and 76% of the sector's capital expenditures) are carried out at the municipal government level, illustrating the practical application of the subsidiarity principle.

Municipal government (cities, urban-rural municipalities, and rural municipalities)

In Poland, there are 2,477 municipalities, including 1,498 rural municipalities, 677 urban–rural municipalities, 256 classic urban municipalities, and 66 municipalities that are cities with county rights (municipalities with special status that are also counties, as described further below).

Rural municipalities consist of several-to-dozens of villages that, together, form a unit of local government; urban-rural municipalities consist of a city and surrounding villages (also several to dozens); and urban municipalities are exclusively cities. The tasks of municipalities include most public tasks of a local nature, in particular:

- spatial planning;
- preschool and primary education;
- municipal roads and public transport;
- social welfare;
- municipal management (water supply and wastewater collection, waste collection, and heating, etc.);
- administrative activities (e.g., issuing identity cards);
- promotion.

The average rural municipality has an area of 125 km2 and a population of 7,100.
The average urban-rural municipality has an area of 167 km2 and a population of 14,200.
The average urban municipality has an area of 47 km2 and a population of 61,200.

In terms of population and area, municipalities are the most diverse level of local government in Poland. The largest municipality (Piła), which is not a city with country rights, has a population of 70,600, while the smallest (Krynica Morska) has a population of 1,300. The largest municipality in Poland, in terms of area (Pisz), has 633.7 km2, and the smallest (Górowo Iławieckie) has 0.33 km2.

Municipal revenues are local taxes (on real estate, agriculture, and means of transportation) and shares in income taxes from individuals and legal entities, as well as grants, subsidies, and income from the sale of property and services provided.

Polish municipalities spent PLN 175.5 billion in 2022, of which PLN 32 billion (18%) were capital expenditure. The expenditure of municipal governments (excluding cities with county rights) account for 50% of total local government sector expenditure and 49% of its capital expenditure, respectively.

The decision-making body of the municipal government is the municipal council, elected by universal elections. The executive body is the wójt (mayor—in cities), who is elected through universal and direct elections by residents.

County government

There are 314 counties in Poland, consisting of up to a dozen municipalities (and 66 cities with county rights). The average land county has an area of 972 km2 and a population of 82,200. On average, there are 7–8 municipalities in its territory (average 7.68). Poland's land counties have a population between 20,000 and over 400,000 and cover an area of 158–2976 km2.

The tasks of a county are:

- running secondary education (secondary schools);
- county road management;
- the organization of county public transportation;
- social welfare, in terms of running nursing homes, family care (e.g., financing family orphanages);
- health care in the scope of running some hospitals;
- labor market services, including the promotion of employment and benefits for the unemployed implemented through district labor offices;
- administrative activities (issuance of driver's licenses, construction permits, vehicle registration, issuance of permits for bus transportation on fixed routes, etc.); and
- county promotion.

The counties' revenues are shares in personal and corporate income taxes, as well as grants, subsidies, and income from the sale of property and services provided. County governments spent PLN 40 billion in 2022, PLN 7.7 billion (19%) of which was allocated to capital expenditure. These expenditures accounted for 11% of total local government sector expenditure and 12% of the sector's capital expenditure, respectively.

Power in county government comes from universal elections, during which councilpersons are elected. A county board is then elected—a collegial executive body headed by the county administrator (the starost).

Cities with county rights

There are 66 cities in Poland that have the status of a city with county rights. This kind of local government is a special type of urban municipality, which, in its territory, also serves as a county government.

However, the tasks of these local government units are broader than the combined tasks of the municipal and county governments. For example, in terms of road management, all national and voivodeship roads within the boundaries of such a city—except for expressways—are managed by the local government (this means taking over the road administration at the voivodeship level and, in part, the national level).

In Poland, 12.6 million residents live in cities of this type—around a third of the country's population. The average city with county rights has an area of 113 km2 and an average population of 190,700. The smallest of these cities is Sopot, with a population of 32,500, and the largest is Warsaw, with a population of 1.87 million.

The income of cities with county rights consists of the same elements as that of municipalities (in slightly different proportions related to the performance of a wider range of tasks).

The expenditure of cities with county rights amounted to PLN 115 billion, including capital expenditure of PLN 17.3 billion (15%), which accounted for 32% of total local government sector expenditure and 27% of the sector's capital expenditure, respectively.

The decision-making body of the self-government of a city with county rights is the city council, which is chosen through universal proportional elections; the executive body is the mayor, who is elected through universal and direct elections by residents.

Voivodeship government

There are 16 top-level local government units in Poland. The average population size of the voivodeship is 2.4 million, and the average area is 19,500 km2. Polish voivodeships have an area of 9,400-35,600 km2 and a population of 0.98-5.43 million. The sizes and borders of the voivodeships correspond to the division into NUTS2 statistical units (used by Eurostat) and, except for the Mazovian voivodeship (which is divided into two units of this division), the borders of the voivodeships coincide with the EU's statistical division into these units.

Tasks of the voivodeship government

One of the most important tasks of voivodeship governments in relation to EU accession is to conduct regional development policy through the distribution of European funds available via regional envelopes. To this end, voivodeship governments prepare regional operational programs in consultation with the government and negotiate with the EC. The largest share of European funds—more than 44%—is allocated to these programs in the current EU budget perspective (for 2021-2027).

Other tasks of the voivodeship government concern:

- the maintenance and expansion of transport infrastructure (voivodeship roads, i.e., the main roads in the regions that are not national or international);
- regional public transport (mainly rail transport);
- health care in the operation of some specialized hospitals;
- culture in the scope of running regional cultural institutions (e.g., opera houses, philharmonics, theaters);
- education in terms of specialized schools (e.g., special schools for students with unusual and rare disabilities who require specialized support and care, e.g., blind/deaf);
- the regional labor market; and
- promotion of the voivodeship.

The expenditure of voivodeship local governments constitutes 7% of the spending of all local governments. This amount would not be sufficient for the proper conduct of regional development policy, but in Poland's current circumstances, this regional government budgetary handicap is significantly offset by EU funds for regional development and is distributed by voivodeship governments.

Local government voivodeships have the most pro-investment and developmental character of all government levels. Their capital expenditure accounts for as much as 12% of the local government sector's investment expenditure (and about 33% of the budgets of the voivodeships themselves). Most of the voivodeships' property expenditure fund the development of transportation infrastructure (mainly the road network).

Power in voivodeship local governments comes from universal elections, which elect voivodeship assembly councilpersons. The assembly as the constituting body then elects the voivodeship board—a collegial executive body headed by the voivodeship marshal.

Metropolitan union

So far in Poland, one metropolitan union has been established (in 2017) by the act under the name of Górnośląsko-Zagłębiowska Metropolia [the Upper Silesian-Dąbrowa Basin Metropolis or the Metropolis GZM].

The union covers the area of Poland's largest agglomeration, consisting of 41 cities and municipalities with a total area of 2,500 km2 and a total population of 2.3 million. The Metropolis GZM received additional personal tax income of PLN 347 million (which accounts for 26% of its revenue) and is sustained by mandatory contributions from its constituent municipalities (which account for 40% of the union's revenue) in the amount of PLN 560 million.

The union's expenditure in 2022 amounted to PLN 1.3 billion and 90% was related to financing public transport in the metropolitan area. However, the tasks of the union are broader and include shaping spatial order, promotion, and the coordination of socio-economic development, including key industries.

In Poland, the representatives of at least five other areas express the desire to build a metropolitan union on analogous terms, but these efforts have not yet been acknowledged in parliament.

3.3. Government and Territorial Government Joint Commission

To secure the interests of the local government sector and solve problems related to the functioning of local government, state policy towards local governments, and the efficient implementation of public tasks entrusted to them, a Government and Territorial Government Joint Commission was established in Poland.

The Commission is composed of representatives of the state government and local governments. The governmental side of the Joint Commission consists of the minister in charge of public administration and 11 representatives appointed and dismissed by the Prime Minister at the request of this minister. On the part of the local government, the Commission includes representatives of nationwide organizations of local government units appointed by these organizations. The Commission participates in the review of draft legislation affecting the operation of the local government sector, its tasks, and the funds allocated for their implementation.

3.4. Discussion on the shape of the local government in Poland

In the case of Poland, the prevailing view is that the reform of local government, particularly its first phase, which involved the creation of self-governing municipalities, is one of the most successful state reforms since the fall of communism (Śmiłowicz, 2015). This view coincides with public sentiment.

The following section of the study outlines the main advantages and weaknesses of the current local government system in Poland.

Main advantages

Effectiveness and institutional maturity of most levels of local government units.

Polish local governments at the basic level, reconstituted in 1990, had time to learn how to carry out their tasks long before joining the EU, and proved to be, in the vast majority, very effective executors of the public tasks entrusted to them. After Poland acceded to the EU, they were an effective disposer of EU funds for development. Enabling local communities to take care of their own public affairs has triggered enormous layers of civic activity and willingness to engage in public affairs at the local level, which, together with appropriate legal and financial tools, have resulted in the civilizational advancement of most Polish municipalities.

However, through the discussion of the successes of Polish local governments in absorbing EU funds, a theme has been raised concerning the effects of spending these funds. Authors of studies on this topic (Gorzelak, 2014; Misiąg, Misiąg and Tomalak, 2013) note that for less-developed local governments, while the large inflow of EU funds has increased the quality of life, it has not contributed to (and sometimes even undermined) economic development. Such a situation, however, is not specific to Poland, but is consistent with the previous experience of other EU member states and applies to the EU cohesion policy as a whole (Ederveen, de Groot and Nahuis, 2006).

The regional governments created in 1998 had two full terms to establish a system for carrying out the task of distributing EU funds at the regional level, which proved to be a sufficient period for them to complete the task.

The voivodeship government has become an effective tool for the distribution of EU funds at the voivodeship level responsible for the implementation of regional operational programs from three consecutive EU budget perspectives (in terms of effective implementation and settlement of EU funds). At the same time, EU funds have enabled voivodeship governments to have a real impact on the conduct of regional development policy.

Public trust

Local governments are the closest to citizens and serve the vast majority of their daily needs in the form of public services. For this reason, they face the most scrutiny from citizens.

Trust in local government at the municipal level is declared by 63% of surveyed citizens, almost half as much as the President of the Republic, nearly twice as much as the state Government, and almost three times as much as the Parliament (CBOS, 2022). Local governments at higher levels are rated significantly lower than the municipal government; nevertheless, here, too, the positive evaluations far outweigh the negative ones.

Introduced in 2002, the direct election of mayors and presidents gave residents of local communities a sense of empowerment. This is probably one of the reasons why Polish municipal-level local governments enjoy one of the highest levels of public trust in public institutions, second only to trust in the military. It should be noted here that municipal governments enjoy the highest level of autonomy of all levels of government, manifested not only in the direct election of the executive power, but also in the right to levy their own taxes (other levels of government only have a share of taxes collected by the central authorities). Public trust in institutions, in turn, is a very important element for the effective implementation of the assigned tasks.

Main weaknesses

The Lack of mandatory minimum performance standards and the optionality of some public tasks.

The lack of minimum standards for the implementation of public services prevents the adequate supervision of local governments by the state administration in the implementation of these services and prevents a response when a local government fails to fulfill its mandatory tasks. An example of such a service is the provision of preschool care in a municipality when a significant number of municipalities do not provide preschool slots for all children in their area.

This situation is even more vividly illustrated by the example of the organization of public transport. Although it is the responsibility of all levels of local government administration, it does not have specific mandatory minimum system standards for any of these levels. In practice, such a situation results in this task becoming virtually optional and many local governments do not organize public transportation at all, leading to transport exclusion.

Lack of supervision over the implementation of some public services.

The lack of minimum standards for the implementation of some public tasks prevents the proper supervision of the implementation of mandatory public tasks (and, thus, limits the possibility of verifying the legality of the actions of a given local government in ensuring the provision of public services to citizens, for which the local government is established).

Inadequate funding of local government tasks.

The lack of binding minimum standards for parts of the public services makes it impossible to reliably assess the cost of performing these tasks. The above situation results in differences in standards of public service provision and the, often, incorrect valuation of the costs of their implementation when determining the distribution of public tasks.

In recent years, there has also been a detrimental decline in the local government's own revenues in relation to the tasks performed, as well as a change in the structure of these revenues, involving a reduced share of tax revenues in favor of centrally allocated subsidies, which is contrary to the idea of self-government.

In particular, in the system of distributing public revenues and mandatory public expenditures, cities with county rights are currently more disadvantaged than other local government units, so their investment expenditures are lower per capita than those of most local county governments (summed expenditures of municipalities and counties). This is an unfavorable and counter-development trend, as these cities are the most important development centers in the subregions concerned.

Questionable justification for the existence of county government.

The most critical aspect of the Polish system of local government is the existence of the county level of government in its current form, which is largely due to mistakes made as early as the introduction of the reform.

Most of the tasks of road management, social welfare, or administrative services for citizens can be effectively carried out by municipal governments, so entrusting these tasks to a higher level of administration is contrary to the principle of subsidiarity. It should be noted that, before the establishment of districts, these tasks were mostly just carried out by municipal governments.

Public tasks in the areas of secondary schools, the organization of public transportation, social welfare, or the issuance of some administrative decisions, for which, among other things, county governments were created, could be carried out by obligatorily created associations of municipalities or regional government. At the same time, some of the tasks that were planned to be entrusted to county administrations under the reform (e.g., security or crisis management) remain the responsibility of the central government, and there is no sufficiently justified need to decentralize them.

In this context, the legitimacy of maintaining a second tier of local government is debatable.

Defective distribution of some of the competencies of local governments and their duplication by various levels of government.

An example of the duplication of power is the legal authorization to run hospitals by both counties and the voivodeship government, with hospitals in the same area competing for centrally distributed public funds (from the National Health Fund).

Meanwhile, the creation of a network of hospitals should be within the competence of the voivodeship or central government. The above thesis is based on the fact that it is only at the regional level that a rationally organized network of hospitals can be created, which will not lead to the dissipation of the potential and suboptimal use of resources (equipment or personnel).

Of course, such tasks could, like other public tasks, be transferred to lower-level local governments by agreement, but with the level of government responsible for the system maintaining control over the shape of this system.

A similar situation occurs in the case of public transportation or road management (where there are often four road managers in one municipality, each of whom is responsible for the winter maintenance of its section of the road network, for example).

Irrational dispersion of administrative functions.

Various levels of local and central government handle administrative tasks that could easily be managed at the municipality office level, which is the closest to the citizens. For example, currently, identity cards are issued by the municipality, driver's licenses or vehicle registration cards by the county, and passports by the central administration (i.e., the voivode's authorities). This contradicts the principle of subsidiarity and results in the suboptimal use of clerical staff, queues, and inconvenience for citizens when dealing with official matters.

The legal impossibility of delegating the implementation of certain tasks to a higher level of government or the joint implementation of tasks by local and regional governments.

Cities with county rights (including metropolitan centers) cannot delegate the organization of part of the public transport on their territory—in terms of rail transport—to the voivodeship government, nor can they create a metropolitan transport association jointly with the voivodeship government. This situation is caused by a flawed doctrinal understanding of the principle of subsidiarity, according to which public tasks can only be delegated as top-down, even though, in the case of some public services, the joint implementation of tasks or the transfer of part of them to a higher level of government is justified.

Inadequate authority of local government over some EU public policies.

The most glaring example of the problem described is the lack of competence of local governments to reduce emissions, which is an important element of EU policy and in very many sectors can—and should—be addressed at the local or regional level.

The situation is similar when preventing the negative effects of climate change, such as the construction of drainage and field irrigation infrastructure or the construction of local and regional flood control infrastructure.

The defective shape and size of some existing local government units .

Some of Poland's local governments have the wrong geographic shape. The problem particularly affects the so-called "ring" municipalities and counties. A ring municipality is a rural municipality located in the vicinity of a city (usually of the same name), which has its seat of government within that city. In such a situation, the main public services for the majority of residents of a given rural municipality are provided by the local government of a given city (e.g., running schools), but tax revenues (from participation in income taxes on residents or property taxes) are collected according to the "ring" unit.

A similar situation occurs in the case of counties, where a county with a seat in the city in question operates in the vicinity of the city with county rights. In Poland, 10% of municipalities (Gibas, 2016) and 15% of counties (CPPUEK, 2021) are of this nature.

Some of the municipal and county governments also have too small a population, and thus too little income for the adequate implementation of their tasks.

Regarding voivodeships, criticism relates to the creation of some voivodeships that are too small, and which are devoid of nationally significant urban centers that can form the basis of their development. These voivodeships have small populations (e.g., Opolskie Voivodeship—0.980 million residents and an area of 9,400 km2; Lubusz Voivodeship—0.98 million residents and an area of 13,900 km2, with the average population of a statistical voivodeship at 2.4 million and an area of 19,500 km2).

Lack of an automatic mechanism to initiate the process of liquidation or the merger of municipalities or counties.

The lack of an automatic mechanism is a situation where, due to a decline in population size and own income, a given unit is unable to properly perform its functions (e.g., a municipality with an underrepresented schoolchildren population is unable to finance one of the main tasks of the local government, i.e., to run a school, since the financing of educational tasks is linked to the number of schoolchildren).

Too many councilpersons at all levels.

In Poland, the smallest municipalities have at least 15 councilpersons. The largest municipalities have 43 councilpersons, the exception being Warsaw, which has 60. Counties have between 15 and 29 councilpersons.

Such a large number of councilpersons generates difficulty in social control and accountability. In the case of municipal government, this situation also creates a disproportion between the position of the wójt or town/city mayors¬—who are directly elected by the residents—and that of a councilperson of a given local government, who is one of a dozen or more representatives of the decision-making body. Such an unbalanced position of the council persons compared to the one-person executive is contrary to the principle of checks and balances. With fewer councilpersons, their scrutiny by the public would be easier, while the actual importance of a single councilperson to the decision-making process would be significantly greater.

4. Recommendations for Ukraine

Conducting the relevant local government reforms urgently enough so that local governments transformed that way have time to organize their work internally and prepare the implementation of the tasks assigned to them before Ukraine enters into the EU (as was the case in Poland).

Creating a matrix of responsibilities of the various levels of public authority with a clear and logical distribution of tasks and responsibilities, making it possible to hold the elected representatives of the authorities of these levels accountable and to inscribe the tasks in the strategic concept of modernization and reform of the state and its institutions.

Table 1: **Matrix proposal**
Source: Authors' compilation

	Central administration	Regional government	Regional government
Strategic planning	preparing a national development strategy	preparing a regional development strategy in line with the objectives of the national development strategy	preparing a municipality/ city development strategy in line with the objectives of the national and regional development strategy
Spatial planning	national development plan, major roads, railroads, inland waterways, airports, seaports and inland ports, intermodal hubs, energy infrastructure, military infrastructure, industrial zones, nature conservation areas, mineral deposit protection areas, flood control infrastructure of national importance; preparing spatial policy, regulations, urban and planning standards; control and monitoring of policy implementation	voivodeship development plan for the tasks specific to a voivodeship (voivodeship roads, flood control, drainage infrastructure); regional logistics and intermodal hubs, regional aviation and rail infrastructure (e.g., metropolitan transportation, hospitals); areas predestined for RES, regional protected areas, regional deposit protection areas, maximum construction footprint areas; agricultural protection areas, etc.	municipal development plan taking into account higher-level plans (national and regional) developed based on planning standards set at the national level
Transport system and the infrastructure required to support it	legal regulations, development of plans and standards for the operation of the national transport system and its subsystems (public transport, intermodal transport, air, inland, and maritime transport) and the infrastructure serving it; financing the construction and maintenance of the above systems; assignment of tasks in the organization of the transport system to local government entities at the national, regional and local levels; construction and maintenance of the infrastructure of international and national importance, both linear (roads and railroads, waterways) and nodal, e.g., seaports and inland ports, airports, intermodal terminals (particularly in a situation where their operation results from the needs of the system and operators are not interested in maintaining such infrastructure on a commercial basis); control and monitoring of policy implementation	construction and maintenance of roads of regional importance and, possibly, railroad lines of such importance (e.g., for metropolitan transport); construction and maintenance of the regional public transport system, integrated with the national system and local systems, and the infrastructure necessary for its operation; construction and maintenance of intermodal transport infrastructure of regional importance (especially when this infrastructure is due to the needs of the system, and operators are not interested in its construction and maintenance on a commercial basis) and regional air transport infrastructure	construction and maintenance of roads of local importance and, possibly, railroad lines of such importance (e.g., for urban transport); construction and maintenance of the local public transport system, integrated with the regional and national systems, and the infrastructure necessary for its operation; construction and maintenance of intermodal transport infrastructure of local importance (especially when this infrastructure is due to the needs of the system, and operators are not interested in its construction and maintenance on a commercial basis) and regional air transport infrastructure

Power industry	legal regulations, construction, and maintenance of the energy production and distribution system at the national level, provision of financing for modernization (expansion of RES and other carbon-free sources); control and monitoring of policy implementation	regional programs to increase energy self-sufficiency, including programs to support citizens, local governments, and entrepreneurs in the development of RES, development, and modernization of district heating systems, possible participation in the construction of energy clusters or regional thermal waste disposal facilities linked to district heating systems (e.g., within energy clusters)	creation and support of RES-based energy clusters; construction and maintenance of urban district heating systems (and, for example, construction of thermal waste disposal facilities linked to district heating systems)
Water supply and wastewater disposal	legal regulations, provision of financing to local governments, supervision (over the entities carrying out these activities through control institutions - in the field of sanitation and environmental protection); control and monitoring of the implementation of the policy	regional support programs for local governments on water supply and wastewater disposal	construction and maintenance of water supply and wastewater disposal systems
Waste management	legal regulations, provision of financing to local governments, supervision (over the entities carrying out these activities through control institutions - in the field of sanitation and environmental protection); control and monitoring of the implementation of the policy	development of a waste management plan on a regional scale, construction of waste segregation and processing facilities, including thermal reprocessing, in cooperation with local governments; supervision over the entities carrying out these activities through control institutions—in the field of sanitation and environmental protection	maintenance of order and cleanliness in municipalities; construction and maintenance of a local system of waste collection, recycling, and disposal; construction and maintenance of the necessary infrastructure; supervision over the entities carrying out these activities through control institutions—in the field of sanitation and environmental protection
Housing, including building modernization	development of regulations, e.g., on building standards and their location and thermal efficiency improvement, operation of housing communities, social and municipal housing, and provision of financing for social and municipal housing and for upgrading existing buildings; control and monitoring of policy implementation	development and implementation of regional programs to support the modernization of buildings financed by EU or other funds and housing programs	development and implementation of local thermal efficiency improvement programs; modernization of municipal buildings; municipal housing; creation of new sites for housing development (as needed)

Integrated policy to reduce emissions of CO2 and other greenhouse gases	development of a national emission reduction plan; legal regulations; provision of financing for the modernization process; development of sector programs (buildings, transport, industry, energy sectors)	development of integrated regional emission reduction programs financed by EU or other funds (including measures related to improving energy efficiency in the building sector and transportation, construction of RES, etc.) and support of integrated activities of local governments, residents, and business entities in reducing emissions through these programs	local emission reduction programs, especially in the field of building thermal efficiency improvement, emission-free heat sources, electrification and improvement of energy efficiency in the transport sector, creation of energy clusters based on RES, etc.
Primary education	development of a policy and mandatory minimum public service standards in this area; providing a funding system; control and monitoring implementation of policy implementation	support of local governments at the primary level (e.g., in the form of aid funds for the implementation of tasks in a given area); running special schools (e.g., specialized schools for students requiring a specialized type of teaching - such as the blind or deaf-mute students)	implementation of tasks in running educational units, construction of educational infrastructure, etc.
Science and university education	regulations, provision of funding for public universities	support for universities, cooperation on clusters, technology parks, etc.; possibly running/co-running some universities	support for universities, cooperation in building clusters and technology parks, etc.
Health care	development of health policies and mandatory minimum standards for public services in this area, provision of financing and regulations, designating national network of hospitals with the highest level of specialization (e.g., for rare diseases) and their maintenance and operation; control and monitoring of policy implementation	implementation of state health policy in the area, including designating a regional network of medical diagnostic units (to implement national or regional standards), designating a regional network of specialized hospitals and their operation; supporting local governments in their tasks	implementation of state health policy in the area, including construction of primary health care infrastructure (medical centers, diagnostic centers, outpatient clinics)
Social welfare	regulations, provision of a financing system, control and monitoring of policy implementation	implementation of social welfare tasks that exceed the capabilities of primary-level local governments (e.g., social welfare or foster care centers for people with severe disabilities, requiring unusual and specialized treatment, etc.)	implementation of basic tasks in the field of social welfare (family support and foster care, running social welfare institutions)
Culture and heritage protection	development of a state cultural policy and cultural heritage protection system; provision of a financing	development and implementation of regional programs for the protection of cultural heritage—	running cultural institutions of local importance and supporting and organizing

	system; development and implementation of national support programs for cultural activities and cultural heritage protection; operation of cultural institutions of state importance and maintenance of state heritage protection services; support of cultural events of national importance	especially of regional importance—and support of cultural activities of local governments; operation of cultural institutions of regional importance and construction of necessary infrastructure; support and organization of cultural events of regional importance; operation and support of art schools	cultural events; protecting cultural heritage in the area; building infrastructure
Environmental protection (air, water, etc.) and nature conservation	regulations, providing a financing system; issuing environmental permits for a certain group of installations; maintaining specialized control institutions for environmental standards and an environmental monitoring system	establishment of air protection zones in the area and introduction of prohibitions and restrictions in force therein, issuance of environmental permits for a certain group of installations, control functions in terms of compliance with issued permits	establishment of air protection zones in the area and introduction of prohibitions and restrictions in force therein, issuance of environmental permits for a certain group of installations, control functions in terms of compliance with issued permits
Land reclamation, flood safety, drought protection	development of regulations; development and implementation of a national program for land reclamation, drought, and flood protection in response to climate change; construction of necessary infrastructure of national importance and other activities (e.g., reforestation); provision of a financing system; maintenance of control institutions for compliance with the water law	development and implementation of regional programs for land reclamation, drought, and flood protection in response to climate change and programs to support the construction of necessary infrastructure and other measures	construction and maintenance of local drainage and water and flood control infrastructure
Supporting economic development and the labor market	creating legal conditions for economic development, tax regulations, fair and efficient judiciary and rule of law, etc.; defining the preferred directions of economic development and specialization and the conditions for their support; supporting industrial development, such as through the creation of Special Economic Zones, technology parks, business incubators, technology clusters and the policy of supporting specific industries resulting from the national development strategy; supporting the labor market personnel training system	defining regional specializations and creating conditions to support them; creating and co-creating (e.g. with local governments, entrepreneurs, universities) economic zones, technology parks, business incubators, technology clusters, etc.; creating regional systems to support human resources and running regional labor market institutions	defining local economic specializations and creating conditions for their support; creating and co-creating (e.g. with regional governments, entrepreneurs, universities) economic zones, technology parks, business incubators, and technology clusters, including preparation of investment areas (greenfield)

Defining minimum mandatory standards for the implementation of public services for all levels of local governments, at least in terms of their most important mandatory tasks (education, infrastructure maintenance, public transport, municipal management, social welfare, etc.).

Limiting the number of levels of local government to two tiers, i.e., basic (local) and regional, and verifying the appropriate adjustment of the size of local government units and their revenues to the tasks to be performed.

Creating a mechanism to reward the cooperation of local governments in the implementation of tasks (local government unions, e.g., metropolitan unions); and, in the case of choosing a two-tier local government system, considering the introduction of mandatory unions of local governments, implementing some public tasks that exceed the capabilities of individual municipalities, and which are not the tasks of the regional government (such as public transportation at the level of districts or the operation of schools in the case of changes in the educational system and the introduction of secondary schools).

Providing the aforementioned units with revenue to carry out their mandatory tasks, at least at a level that meets certain minimum standards for such tasks.

Providing local governments with a wide range of autonomy in the implementation of tasks to activate the potential of local communities, while creating tools to control the legality and transparency of their actions (on the part of government administration and the courts).

Introducing democratic methods for the election of executive authorities at each level of local government, including executive authorities in regional government (e.g., through the election of the executive body by the constituent body of a region or the direct election of executive authorities).

Establishing an adequate number of elected representatives of the governing bodies, who will allow for effective democratic control and accountability of the results of their work by the public through democratic elections. The number should not be too large, so that citizens' control is not illusory, and to avoid a serious imbalance between the executive and the legislative bodies (especially when the executive comes from universal elections).

Creating a platform for the cooperation and discussion of local government tasks, modeled on the Government and Territorial Government Joint Commission—taking local government seriously requires the creation of a permanent platform for dialogue and reconciliation of its needs and interests with the central administration.

Establishing a permanent cyclical mechanism for analyzing and adjusting the competencies of local government and other institutions to implement higher level (national or European) policies, such as energy or climate policy, intermodal transport, and education (the above goal can be one of the tasks of the body described in the previous section).

References

Act of 8 March 1990 on municipal self-government, Journal of Laws 1990 No. 16 item 95. https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU19900160095/U/D19900095Lj.pdf.

Act of 5 June 1998 on county self-government, Journal of Laws 1998 No. 91 item 578. https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU19980910578/U/D19980578Lj.pdf.

Act of 5 June 1998 on voivodeship self-government. Journal Laws 1998 No. 91 item 576. https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU19980910576/U/D19980576Lj.pdf.

Center for Public Policy at the Cracow University of Economics. (2021). *Report: Zasadność funkcjonowania* powiatów obwarzankowych *w świetle 20 lat doświadczeń z samorządem powiatowym w Polsce.*

Ederveen, S., de Groot, H.L.F., Nahuis, R. (2006). *Fertile Soil for Structural Funds? A Panel Data Analysis of the Conditional Effectiveness of European Cohesion Policy.* Kyklos.

Gibas, P. (2016). *Analiza tempa rozwoju tzw. gmin obwarzankowych na tle pozostałych gmin w Polsce.* University of Economics in Katowice.

Gorzelak, G. (2014). *Wykorzystanie środków Unii Europejskiej dla rozwoju kraju.* Studia Regionalne i lokalne. https://studreg.uw.edu.pl/dane/web_sril_files/503/2014_3_gorzelak.pdf.

Ministry of Finance. *Sprawozdanie z wykonania budżetu państwa za okres od 1 stycznia do 31 grudnia 2022 roku. Informacja o wykonaniu budżetów jednostek samorządu terytorialnego.* https://www.gov.pl/attachment/eef62d80-4946-4aac-9917-a9b27285febc.

Misiąg, J., Misiąg, W., Tomalak, M. (2013). *Ocena efektywności wykorzystania pomocy finansowej Unii Europejskiej jako instrumentu polityki spójności społeczno-gospodarczej oraz poprawy warunków życia,* Rzeszów: University of Information Technology and Management.

PAP Local Government Service. (2014). *Siła reformy. Samorząd złamał pięć monopoli autorytarnego państwa.* https://samorzad.pap.pl/kategoria/archiwum/sila-reformy-samorzad-zlamal-piec-monopoli-autorytarnego-panstwa.

Public Opinion Research Center. (2022). *Research Announcement No. 37/2022: Public Trust.* https://www.cbos.pl/SPISKOM.POL/2022/K_037_22.PDF.

Śmiłowicz, P. (2015). Dwie reformy samorządowe – pierwsza udana, druga mniej. https://dzieje.pl/aktualnosci/dwie-reformy-samorzadowe-pierwsza-udana-druga-mniej.

Statistics Poland. (2019). *Powierzchnia i ludność w przekroju terytorialnym w 2019 roku.* https://stat.gov.pl/obszary-tematyczne/ludnosc/ludnosc/powierzchnia-i-ludnosc-w-przekroju-terytorialnym-w-2019-roku,7,16.html.

Contents

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EUROPEAN UNION COMMON MARKET

Opportunities and challenges of integration into the common market on the example of Poland

Krzysztof Bocian

Summary

This chapter presents an analysis of Poland's experience in the European Union common market with a focus on the transition of the Polish economy towards a free market economy and European integration, along with the challenges and benefits of the common market after accession. The analysis consists of three parts, which present:

- a brief historical overview of European integration,
- Poland's experience in economic transition and the path to the EU common market,
- recommendations for Ukraine based on lessons from Poland's experience.

Key conclusions from the analysis:

- The origins of official European integration date back to 1952, when the European Coal and Steel Community was established. The European Union in its current form (since 1993) includes an increasing number of member states and the integration process is evolving, with an advanced common market, a monetary union—now with 20 member states—and elements of an economic union, including a common trade policy and, in part, a foreign and migration policy.
- Poland's efforts to join the common market began well before its official accession. To function in the common market and reap its benefits, Poland changed its system from an inefficient planned economy (or command economy) to a market-based economy. The economic transformation included three main pillars: liberalization, stabilization and institutional reforms.
- Liberalization included the restoration of free economic activity, the abolition of distribution (rationing), the deregulation of prices, the growth of private enterprise, the emergence of competitive pressure, and the growth of international exchange. The stabilization of the economy was aimed at overcoming imbalances in the fiscal (budget deficit and debt), monetary (fighting inflation), and foreign currency (foreign exchange deficits) areas. The third element of the reforms was the reconstruction of institutions, which involved ownership transformations aimed at increasing the share of private ownership in the economy in line with the direction of economic incentives.

- At the same time, Poland intensified its activities in the field of European integration. Specialized bodies supporting integration, strategies formed by the Polish government, concluded international agreements, and available pre-accession funds were important for integration processes.

- Poland has enjoyed a number of benefits from joining the common market, with the most significant being the inflow of foreign investment, mobility and development of the labor market, the growth of SMEs, competition with foreign companies and a major increase in trade. These, and many other, factors have resulted in a significant increase in Poland's per capita income, which is currently 80% of the EU27 average (compared to 44% in 2004).

- In the course of preparing for accession, Poland also had to bear the costs of adaptation, structural reforms and the adjustment of laws to EU standards. This involved modernizing infrastructure, reorganizing economic sectors and adapting standards and norms to EU requirements.

- The Polish experience can provide lessons for Ukraine in the context of the accession process. Key aspects include institutional reforms, supporting entrepreneurship, building international relations, social development and education, the use of specialized bodies to support reforms, and the utilization of pre-accession funds.

1. Evolution of the European model of economic integration

Two parallel processes have been evident in the world economy for several decades: globalization and regionalization. They are a consequence of liberal trade policies and technological advances, which have made it possible to conduct business on a large scale while benefiting from the comparative and competitive advantages of individual countries and regions.

The European Union fits in well with these trends. In terms of scale, this has been particularly evident since the 1990s, but the origins of integration processes go back much further. Its evolution started with the European Coal and Steel Community (since 1952) and continued through the European Economic Community (since 1958), developing into the European Union in its present form (since 1993). An increasing number of member countries are being ecompassed and developed to the present day. This process, evolving over the decades, moved member countries higher and higher up the ladder of economic integration with an advanced common market, a monetary union that now has 20 member countries, and elements of an economic union, including a common trade policy and, in part, a foreign and migration policy (cf. Table 1).

Table 1: **Stages of economic integration**
Source: Bożyk, P., Misala, J. (2003), Integracja ekonomiczna, PWE.

Features differentiating forms of integration	Stages of economic integration						
	Free trade area	Customs union	Common market	Monetary union	Economic union	Political union	Full integration
Elimination of customs duties and trade barriers							
Common external customs tariff and common trade policy							
Free movement of goods, services, people and capital							
Common currency, uniform monetary and exchange rate policy							
Unification of economic policies							
Unification of domestic, foreign and defense policies, supranational public authorities							
Uniform supranational policy							

■ Tiers are fully achieved by the EU

■ Tiers are fully achieved by some countries or partially achieved by all countries

■ May be achieved in the future

The process of European integration was initiated in 1950 by the French foreign minister R. Schuman, who proposed the establishment of the European Coal and Steel Community (ECSC). In 1951, a common market for coal and steel combining the markets of the six founding countries (Belgium, France, the Netherlands, Luxembourg, West Germany and Italy) was established and became operational a year later. In 1958, the Treaty of Rome established the European Economic Community (EEC), liberalizing trade in goods and services between EEC member countries. In the 1960s, the common external customs tariff was unified within the EEC structure, thus creating a customs union and common policies (trade and agriculture) and, in 1968, the European Free Trade Agreement (EFTA) started to function, ensuring the free movement of industrial goods between member countries.

In 1973, the European Monetary Cooperation Fund was established, and in 1979 the European Monetary System, the first step toward a common currency, began operating. At around the same time, the European Social Fund and the European Regional Development Fund were created (1975), and cyclical meetings of heads of government of member states were institutionalized in the form of the European Council (1974). Five years later, universal and direct elections were used to elect members of the European Parliament for the first time.

In 1985, the Single European Act was agreed upon, adopting key regulations for the Single Market and ensuring the free movement of goods, services, people and capital (the Schengen Agreement). In 1991, the Treaty on European Union (Maastricht Treaty) was signed. In the same year, the European Bank for Reconstruction and Development was created, and on 1 January 1992, the common market was officially established, operating under previously adopted rules. Integration was accelerating, and member countries were increasing their areas of cooperation.

At the same time, Poland was facing challenges of a very different nature and that was when its efforts to join the common market began.

2. Poland in the common market

2.1. Development of market mechanisms

The need for reform

By the end of the 1980s, the communist system was going into decline. Centrally planned economies increasingly manifested their inadequacies, and economic hardships intensified social discontent over violations of civil rights and freedoms. Immediately after regaining independence, Poland unequivocally demonstrated its desire to integrate with Western European countries. A prerequisite for achieving this goal were the reforms that began shortly after the fall of communism and were aimed at transforming Poland into a democratic country with a market economy.

The old planned economy (or command economy) was based on state ownership and central planning. The ownership structure of enterprizes was dominated by the state, which also planned production and investment on a distribution (rationing) basis. Administrative coordination also involved prices and exchange rates. The State Economic Planning Commission (SEPC) and the State Price Commission (SPC) were the main regulatory bodies. The SEPC made key decisions on the volume of goods and services produced at the national level. It also determined production plans for various economy sectors, which translated into the availability and supply of specific goods, and deciding on capital expenditures influenced the development of various branches of the economy (or lack thereof).

The command economy mechanism did not ensure the efficient allocation of resources and led to serious problems.

The command economy mechanism did not ensure the efficient allocation of resources and led to serious problems with the balance of supply and demand. There were shortages of various goods and, at the same time, an oversupply of others. Many sectors were overstaffed, while others suffered from a shortage of professionals. Internal currencies were often not convertible on the foreign exchange market. There were different exchange rates for a given currency for the state, for companies and the black market.

Differences existed in economic and institutional conditions, as well as in tradition, culture and social capital between the various socialist countries. In Poland, the share of the private sector, despite drastic restrictions, was much higher than in the USSR. Poland's less-developed administration and favorable socio-political factors that facilitated the reform also worked to Poland's advantage. Elements of civil society were present, including the Solidarity movement, which, at its peak, had 10 million members.

Anatomy of reform

To shift the economy to market principles, an economic programme was introduced with three interlocking wheels: liberalization, stabilization and institutional reforms (Balcerowicz, 1977). Initially, these wheels were spinning in partially different directions, for example, liberalization, unveiling suppressed inflation and unemployment, exacerbated instability. However, due to the strategic interdependence of the wheels, e.g., the impact of liberalization on long-term stability, it was decided that all three would be set in motion at similar times.

Liberalization included the restoration of free economic activity, including trade, the abolition of distribution and the deregulation of prices. Strong growth in private enterprize was a positive effect of liberalization. Competitive pressures emerged, clearing the market of unprofitable companies and bringing improvements in product and service offerings. Reducing state protection led to an increase in trade. International exchanges developed, and were reoriented toward Western markets. The transfer of technology and know-how to the country became possible.

A side effect of liberalization was a temporary transformational recession. The withdrawal of state subsidies for unprofitable enterprizes meant their collapse and the resulting decline in domestic production. At the same time, the closure of workplaces resulted in a dramatic increase in unemployment, weakening demand and further limiting production. The deregulation of prices and the exchange rate of the Polish zloty had a similar effect, exacerbating inflation by reducing the currency's purchasing power. Both the increases in inflation and unemployment were more about revealing previously suppressed phenomena than about their generation.

The second pillar of market reforms was the stabilization of the economy, i.e., measures aimed at overcoming imbalances in fiscal (budget deficit and debt), monetary (fighting inflation), foreign currency (foreign exchange deficits) and other areas. The foundation of fiscal policy was a new, strengthened Ministry of Finance, in contrast to the communist period when each ministry had its own budget plans. The fight against the budget deficit was carried out by cutting spending, especially soft spending (e.g., subsidies for industry and agriculture and restrictions in the social sphere) and abandoning deficit money printing.

Sales tax was abolished and replaced by VAT.

As part of fiscal policy, the tax system was reformed, simplified and standardized (liberal element), while taxation was differentiated according to the situation of the entity (social democratic element). Sales tax was abolished and replaced by VAT. PIT, CIT and new environmental taxes were also introduced, taking into account the environment ruined by years of socialism (cf. Prof. Karaczun's chapter entitled Ochrona środowiska [Environmental Protection]).

Monetary policy included institutional changes in the banking system, most notably the abolition of the monobank and the transition to a two-pillar system based on the central bank and commercial banks. The independence of the central bank from the government was adopted as a systemic element, and the control of the population's income by limiting the indexation of wages and adjusting them to productivity growth was adopted as a transitional element. Within a monetary policy, the convertibility of currencies was established, both internally and externally. Also, a single exchange rate was chosen, taking into account its impact on exports and imports.

The final element of the reforms was the reconstruction of the institutions, described in more detail in the section by Krzysztof Głowacki entitled Nowe zasady gry. Changing the economic system required new rules. Among the most important newly-established institutions was the independent central bank mentioned earlier, as well as the Antitrust Office (now the Office for Competition and Consumer Protection). Business support institutions were also established: the Industrial Development Agency (1991), the Agency for Restructuring and Modernization of Agriculture (1993) and the Polish Agency for Enterprize Development (2000).

Another part of the institutional changes was ownership transformations, which aimed to increase the share of private ownership in the economy in line with the direction of economic incentives. Privatization methods in Poland were adapted to the challenge of the huge number of state-owned enterprizes—around 8,800 (Blok, 2006). The privatization of all enterprizes by individual design was unrealistic. Accordingly, several methods of privatization were used:

- Common—involving the individual sale of a wide spectrum of state-owned enterprizes, applied on a large scale, mainly using privatization vouchers; it aimed to disperse share ownership in society and involve citizens in the capital market
- Auction—involving the transfer of state assets for a fee through an auction system, used on a limited scale
- Managerial-employee—resale of company shares to employees; in this case, the problem was the lack of sufficient funds in the workforce to finance the takeover, which sometimes led to the transfer of plants free of charge

Transformation assessment

The transition of the economic system from a command economy to a market system was completed back in the 1990s. After a temporary period of recession, Poland entered a path of rapid economic growth, which meant a significant improvement in citizens' quality of life. This growth has been supported by the liberalization of the economy, privatization and integration into international markets. The economic transformation meant profound changes in the institutional structure, including banking, the tax system and business environment institutions.

The privatization process had a big impact on the Polish economy. While some aspects of the process may be criticized, privatization has contributed to the emergence of a competitive business sector and improved efficiency in many industries. Poland was also one of the few post-communist countries not affected by the financial crisis.

The transformation also had some side effects. There was an increase in unemployment, especially during the initial period. As the economy was creating new jobs, the unemployment rate gradually fell. The economic transformation also increased social inequality, but some groups benefited more than others.

Through the integration with the European Union, the support of non-governmental organizations and foreign financial aid has accelerated and strengthened the scope of the positive effects of the transformation. At the same time, Poland's consistent actions have positively influenced the evaluation of efforts towards association with the European Communities and subsequent membership in the European Union.

It is worth noting that, during the pre-accession period, various government teams, regardless of party affiliation, consistently worked to bring Poland closer to EU membership. Supra-partisan approach and consensus on European integration at an early stage were crucial, as they determined the direction of the Polish state in later periods.

2.2. Toward a common market

Poland joined the EU in 2004, along with nine other Central and Eastern European countries. It was the EU's biggest enlargement, aiming to reunite the continent after the fall of the Iron Curtain. For Poland, it was the culmination of a several-year accession process. In addition to the political changes described above, specialized bodies supporting integration, strategies formed by the Polish government, international agreements concluded and available pre-accession funds were also important for the dynamics of the integration processes.

Institutions

In light of the membership effort, institutions were established to organize, coordinate and monitor the progress of the integration process, the most important of which were:

- Committee on European Integration (1996)—the supreme body of government administration for programming and coordinating policy on matters related to Poland's integration into the European Union, including measures to adapt to European standards. The committee also coordinated the state administration's activities about the foreign aid received.
- The Office of the Committee on European Integration (1996) carried out the tasks of the Committee on European Integration.
- The Team for Negotiating Poland's EU Membership (1998) was established to coordinate Poland–EU negotiations.

International agreements and documents

In the early days of Eurointegration, Poland was very active in the field of diplomacy. In 1988, long before official negotiations began, Poland had already established diplomatic relations with the European Community. In 1991, Poland was admitted to the Council of Europe, which confirmed that it was a democratic state in which human rights were respected. In addition, Polish diplomacy began efforts to join the North Atlantic Alliance (NATO) and has been involved in numerous regional formats, including The Visegrad Group, the Central European Initiative, the Council of the Baltic Sea States, the Central European Free Trade Area and the Weimar Triangle.

Details of these events and other milestones are described below.

- The Establishment of diplomatic relations with the European Economic Community (1988): After World War II, Poland, being under the influence of the Soviet Union, could not independently decide on its foreign policy, and the communist authorities of the time were hostile to the Community. It was not until the 1970s that official and, importantly, private relationships, and relations between the leaders and societies of Poland and Western countries became closer. Poland sought closer relations with the West for several reasons. The public manifested aspirations for democratization, the rule of law and human rights. It expressed hopes for the liberation of the inefficient planned economy and movement toward market mechanisms in a country that had not had the opportunity to realize its potential since World War II. The European Community also offered financial support that could help transform the economy and modernize infrastructure. In 1988, a declaration was signed normalizing relations between the Council for Mutual Economic Assistance and the European Communities. This created the conditions for the Polish authorities to establish diplomatic relations with the EEC.

- **Agreement between Poland and the EEC on trade and commercial and economic cooperation** (1989): To stimulate the mutual exchange of goods, a bilateral agreement on economic and commercial c ooperation was signed.
- **Europe Agreement** (1991): An agreement regulating the basis of mutual relations between Poland and the European Communities, including the area of economic cooperation and political dialogue. The agreement covered issues of trade, movement of services, capital, workforce, establishment of businesses, harmonization of Polish and EU regulations, and financial and cultural cooperation. The treaty entered into force in 1994.
- **Interim Agreement** (1991): This concerned trade and related matters between the Republic of Poland, the European Economic Community and the European Coal and Steel Community.
- **Official application for membership in the European Union** (1994): This was the formal start of the accession process.
- **Pre-membership strategy** (1994): This was a roadmap for candidate countries, preparing them for the integration process.
- Poland-EU White Paper (1995): A report on the preparation of associated countries for integration into the single European market. It presented the necessary regulations to be introduced in the candidate countries, outlining their goals, nature and methods of implementation.
- **AVIS** (1996): A document for EU member states presenting the political and economic situation of Poland, thanks to which it was possible to start membership negotiations.
- **National Integration Strategy** (1997): An outline of strategic lines of action to guide the work of government bodies, as well as to guide all other participants in the integration process. The strategy was to define the main goals of integration and coordinate their implementation by the government administration in a way that, with the broad participation of non-governmental organizations, would ensure the best possible preparation of Poland for membership in the European Union.
- **National Programme of Preparation for Membership in the European Union** (1998): A document that set the direction of adjustment activities and defined the timetable for their implementation. Based on the document, adaptation priorities for 30 areas of economic life were specified and then modified.

1 Free movement of goods; 2. Free movement of people; 3. Freedom to provide services; 4. Free movement of capital; 5. Company law; 6. Competition policy; 7. Agriculture; 8. Fishery; 9. Transportation policy; 10. Taxes; 11. Economic and monetary Union; 12. Statistics; 13. Social policy and employment; 14. Energy; 15. Industrial policy; 16. Small and medium-sized enterprizes; 17. Science and research; 18. Education, training and youth; 19. Telecommunications and information technology; 20. Culture and audiovisual policy; 21. Regional policy and coordination of structural instruments; 22. Environment; 23. Consumer and health protection; 24. Justice and internal affairs; 25. Customs union; 26. External relations; 27. Common foreign and security policy; 28. Financial control; 29. Finance and budget; 30. Other adjustment issues.

- **Start of membership negotiations:** This was divided into 31 areas, two of which were non-negotiable (institutions and other issues); in 14 areas there was no conflict of interest, and 15 contentious issues were negotiable. These were mostly of an economic nature, i.e., the free movement of goods, people, services and capital, competition policy, agriculture and fishery, transportation policy, social and employment policy, environment, taxes, energy, telecommunications and information technology, justice, internal affairs, finance and budget.
- Treaty of Nice (2000): This gave Poland votes, which were distributed among the EU Council, the European Parliament and the European Commission.
- **Completion of negotiations** (2002).
- **Signing of the Accession Treaty** (2003).
- **Poland's accession to the European Union** (2004).

Funds (adjustment programmes)

In parallel, the European Communities offered Poland and other candidate countries three pre-accession funds oriented toward key areas in the adjustment process. Poland was able to benefit from the following funds:

- **PHARE** (Poland and Hungary: Assistance for Restructuring Their Economies) financed institutional strengthening projects (including public administration reform) and public investments (including road and wastewater treatment plant construction, urban renewal, support for SMEs, human resource development, such as training courses).
  In 2007, the PHARE fund was replaced by the Instrument for Pre-Accession Assistance (IPA) as an instrument of aid measures for candidate or potential candidate countries. A candidate country can benefit from IPA measures aimed at:
  - strengthening institutions during the transition period;
  - cross-border cooperation with EU countries and candidates;
  - regional development (transport, environment, economy);
  - human resources development (fighting social exclusion, strengthening human capital);
  - the development of rural areas.
- **The ISPA** (Instrument for Structural Policies for Pre-Accession) helped implement European Union standards and norms in transport infrastructure and environmental protection (funding for TSUs to implement big investment projects). Upon joining the European Union, Poland began to benefit from the Cohesion Fund, which operates under similar rules.
- **SAPARD** (Special Accession Program for Agriculture and Rural Development) supported the modernization of farms, agricultural raw material processing and rural infrastructure.

2.3. Benefits of the common market

Poland's accession to the European Union and integration into the structures of the common market was associated with many positive consequences, but also some negative ones. In many cases, similar effects can be replicated in the case of Ukraine's accession.

Developing countries, which in recent decades have included EU candidate countries, face the challenge of convergence, i.e., equalizing development differences with developed countries. The dynamics of this process are affected by the amount of GDP growth rate, and specifically, there is a negative correlation between the level of economic development and the growth rate. This is because the development opportunities are much higher in poorer countries than in wealthier countries: capital accumulation is lower, social capital is underutilized, and the institutional environment in which the market operates shows considerable room for improvement.

Economic integration facilitates economic exchanges along the lines of so-called comparative advantages between partner countries, activating hitherto untapped reserves of growth. Integration means the free movement of goods, services, capital and people, and ensures the standardization and harmonization of regulations. Both make it easier to do business across the EU.

In Poland, this has translated into a number of tangible benefits. First, there was an increase in foreign investments, both portfolio and direct (see Chart 5). The country has become more attractive to foreign investors, and direct investment has aided the development of many sectors of the economy.

Second, human capital has developed and the labor market hwas strengthened, raising the competitiveness of the economy. Based on the transfer of knowledge and know-how that took place through direct investment, there was an increase in the competence of employees. Opening up to foreign workers has strengthened the labor market. In turn, Polish workers' access to the European labor market initially resulted in an exodus. Over time, and with the improvement of life quality and employment in Poland, many immigrants of that wave are returning or have already decided to return. In addition, Poland is beginning to attract specialists from different parts of the world.

Third, small and medium-sized enterprizes (SMEs) were developed, which has played an important role in creating new jobs. This growth in entrepreneurship traces its roots to the post-1989 transformation—the unblocking of business activity, privatization, and the abolition of state monopolies. SMEs had access to both national and EU funding, which supported their development, especially in the early stages. Poland's integration into the global market (especially the European market) gave SMEs access to new markets, which supported their development, while technological advances made it easier for them to attract new business partners and clients. Companies began to operate in many new industries and produce on an increasingly large scale, and most of the goods went to foreign markets (mainly exports to the EU).

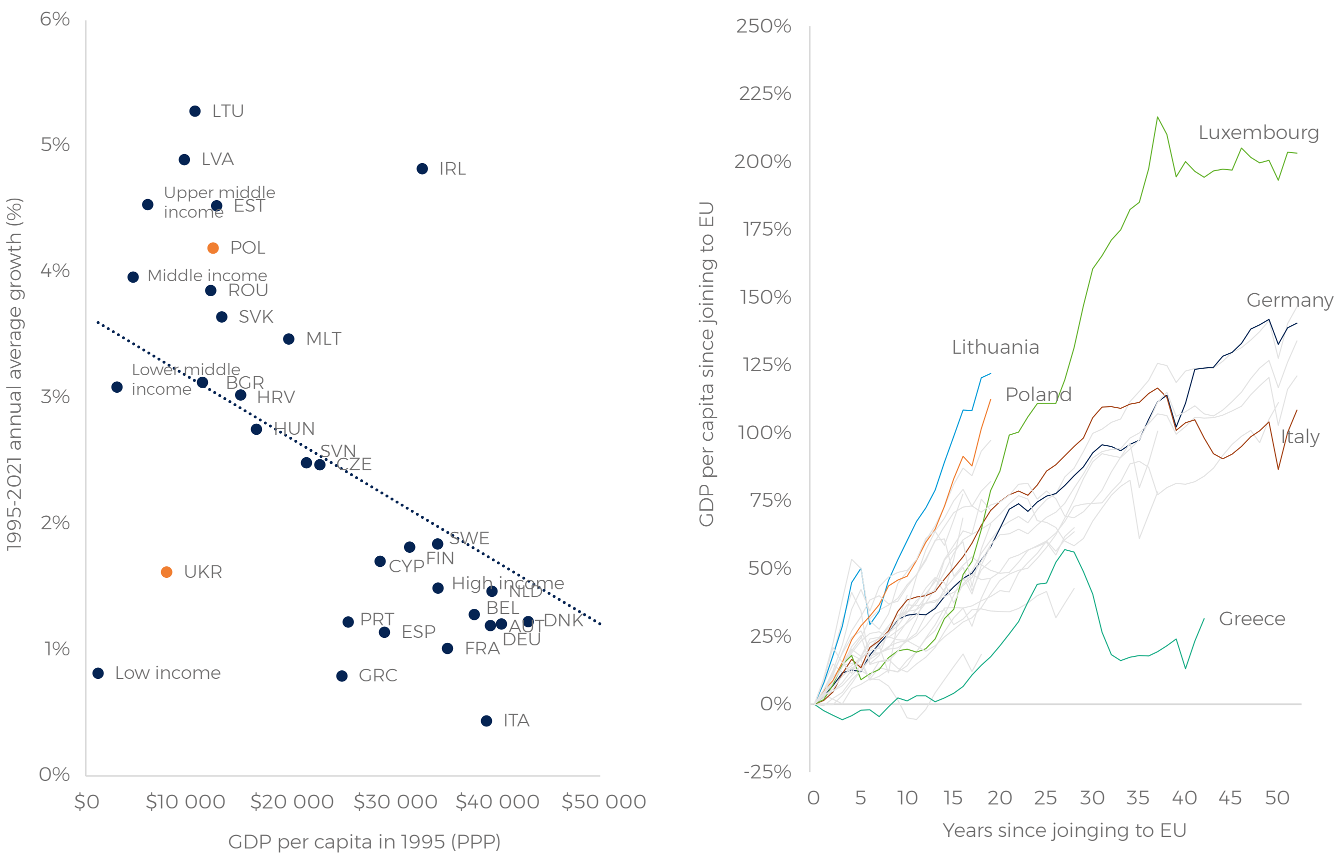
Fourth, Polish companies entered into competition with enterprizes from other countries, which provided an additional incentive to improve the quality of products and services. This increased the competitiveness of the country as a whole on the international stage, which was necessary in an increasingly globalized world.

In doing so, some Polish companies took advantage of a special instrument, the so-called protected origin of products. It allows products to be registered in Protected Designations of Origin, Protected Geographical Indications and Traditional Speciality Guaranteed categories, so that traditional country goods are protected against commercial exploitation, misappropriation, false or misleading data relating to the place of origin and other practices that may mislead interested parties about the product's origin. There are 45 such products registered in Poland (including bryndza podhalańska, oscypek, cebularz lubelski and others).

Accession to the common market meant supporting the transformation process of the Polish economy and providing opportunities for faster economic development compared to the counterfactual scenario (if Poland had not joined the EU). Poland made good use of this opportunity.

Chart 1: **Growth of GDP per capita of EU27 countries since accession* (left panel) and growth rate of GDP per capita of EU27 countries and Ukraine in 1995–2021 (right panel).**

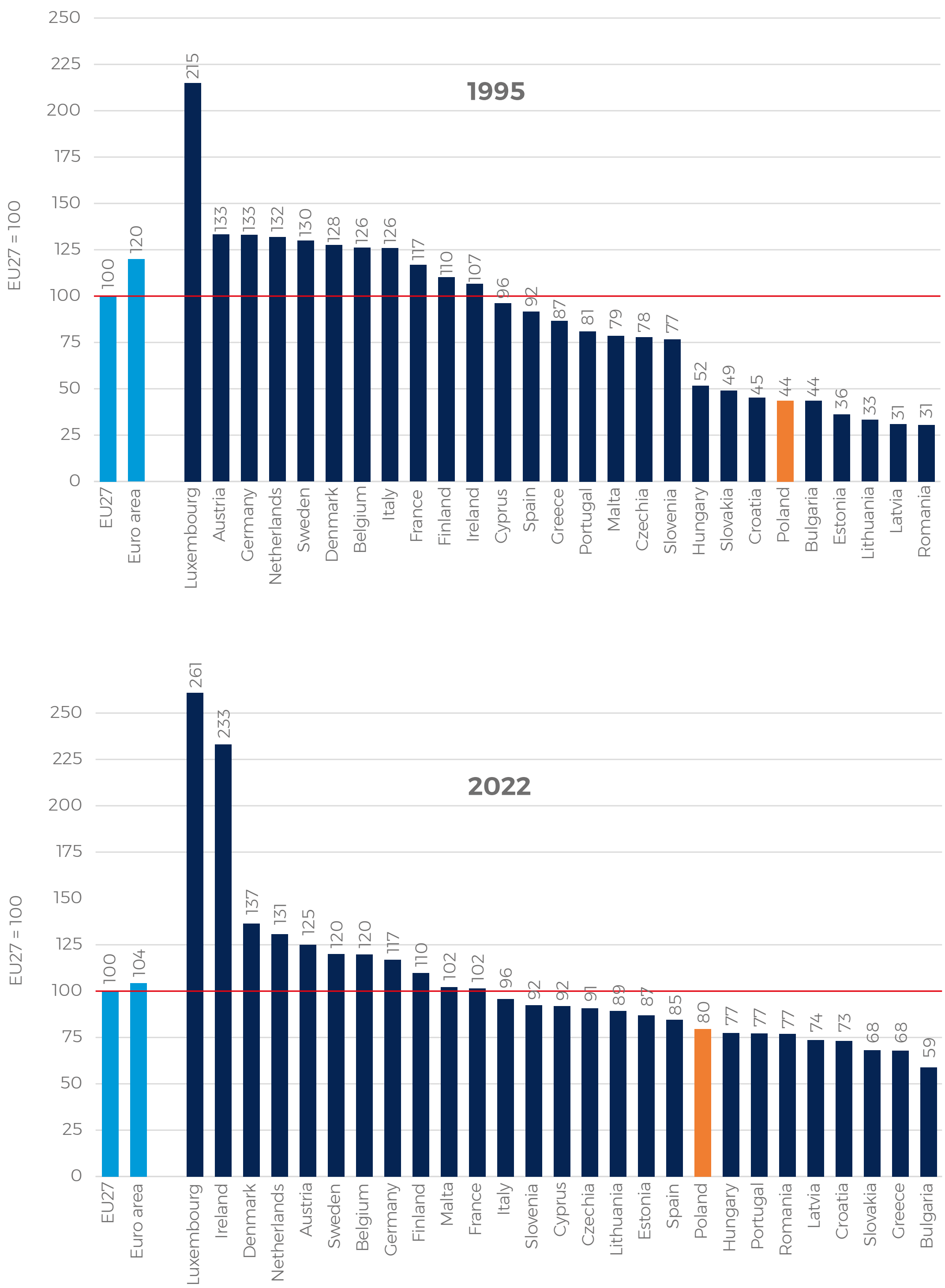
Source: Compiled by WiseEurope based on World Bank data.



* For the 6 founding countries, data since 1971. It does not include Ireland.

All countries that are members of the European Union observe a similar phenomenon. Over the past three decades, per capita income readings in the EU27 have flattened, i.e., differences from the EU average as well as individual countries are smaller (Chart 2). This is particularly evident in the case of countries from the 2004 enlargement, such as Estonia, Lithuania, Latvia, Poland, Slovakia and Slovenia. Bulgaria and Romania, which joined the EU in 2007, are also rapidly closing the gap with the EU average, and significant improvements have been seen in the living standards of their citizens over the past 15–20 years.

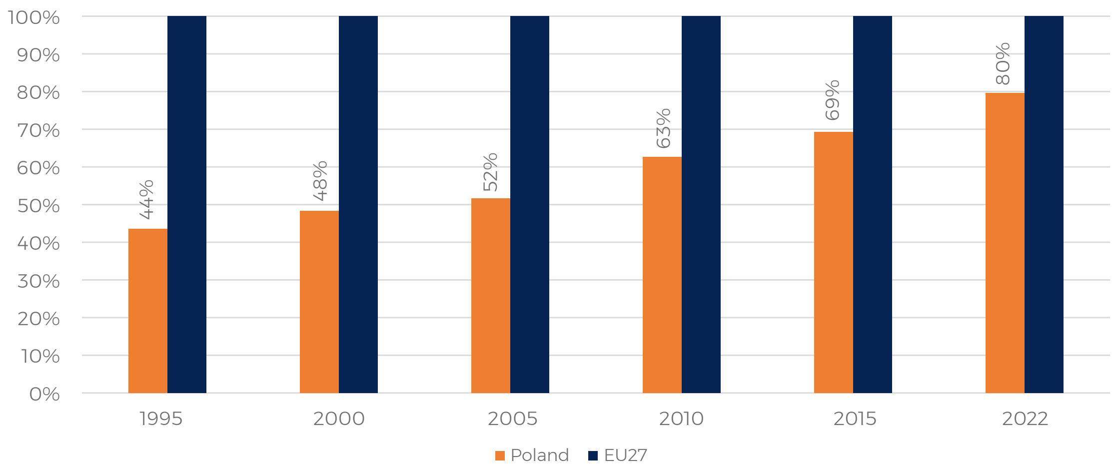
Chart 2: **GDP per capita percentage of EU27 (PPS).**
Source: Eurostat.

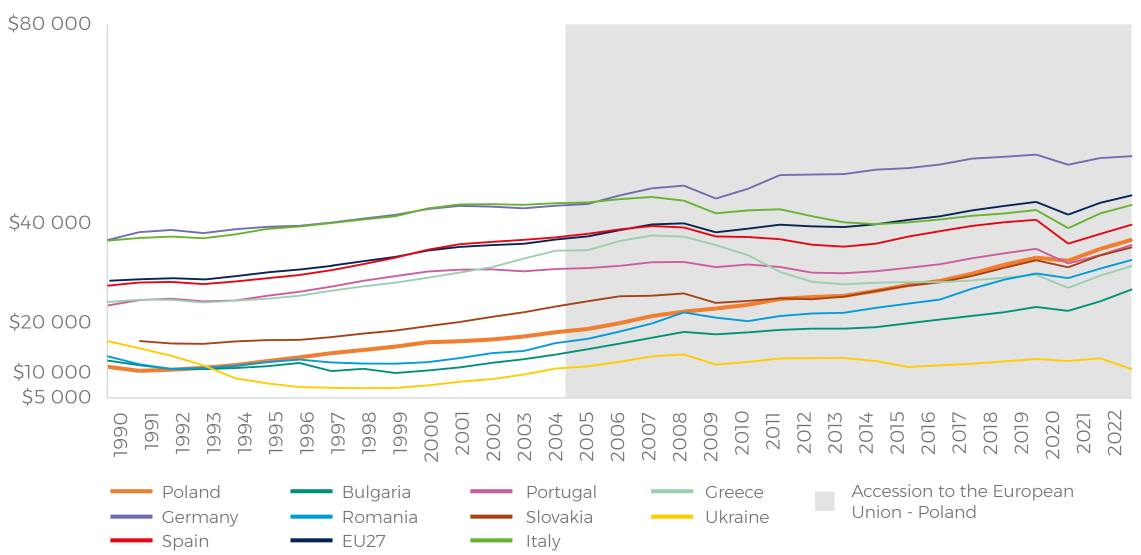


Considering the data since 1995, when Poland's economy entered a path of dynamic development, per capita income has almost tripled (by 197%): from USD 12,399 to USD 36,798 in 2022 (2017 constant prices, PPP). While Poland was rapidly getting richer and catching up with wealthier countries, Ukraine almost stood still: its per capita income increased from USD 7,906 to USD 10,731 (up 36%). As a result, the gap between the prosperity of the average Polish and Ukrainian citizen has widened. In 1995, Ukraine's GDP per capita was 63.8% of that of Poland; in 2022, it was only 29.2%.

The well-being of the average Polish citizen is steadily improving. At the time of its accession to the EU, Poland's GDP per capita was 52% of the EU average, and today it is already 80%. If the convergence trend is maintained, in line with the premise of narrowing the gap by about 2% per year, Poland should equal the EU27 average at the beginning of the next decade. Considering the economic aspect, the most important benefit of joining the integration and being able to participate in the common market is, therefore, the possibility of accelerating economic convergence through trade and investment and the associated effects of competitive pressure, the inflow of know-how and capital accumulation. This was the case for Poland and other poorer countries (especially the Central and Eastern European regions).

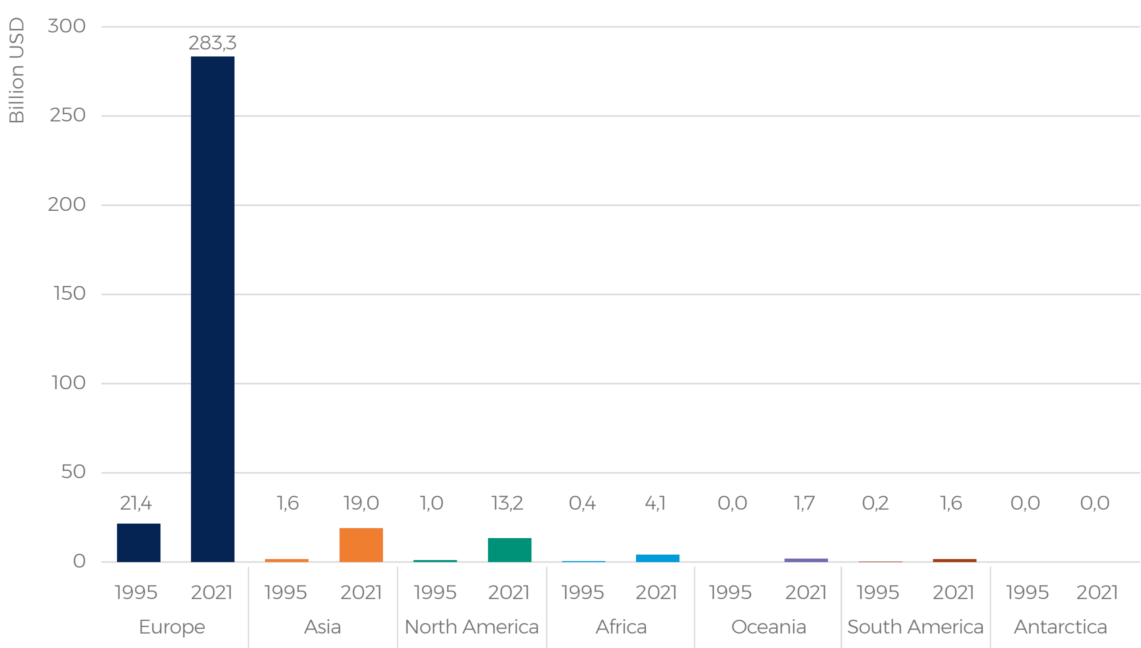
Chart 3: **GDP per capita PPP (left panel) and Poland's GDP per capita as a percentage of the EU27 average (right panel).**
Source: Eurostat.

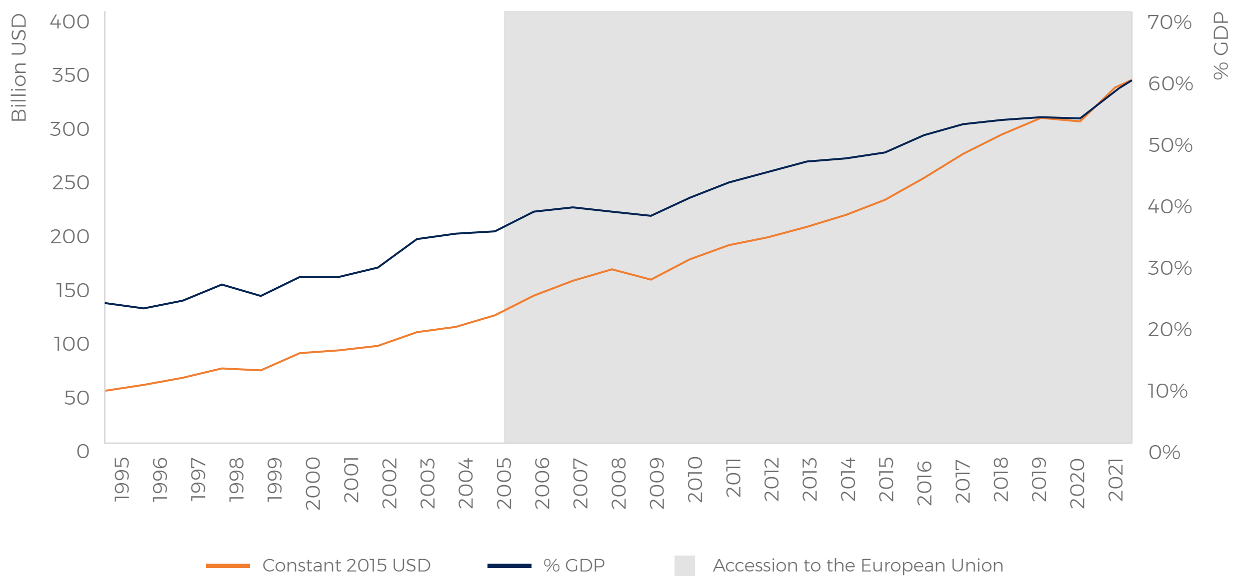




In the European Union, economic integration, or incorporation into the structures of the common market, is achieved through the free movement of goods, services, capital and people between member states. As a result of the removal of customs barriers, trade between countries in the preferential area is increasing, and EU countries are gaining the benefits of trade due to the high advancement of the integration process. An assessment of Poland's trade position in the context of accession to the common market can be analysed in five areas: (1) the growth rates of exports and imports; (2) participation in intra-EU trade; (3) trade balances; (4) the development of intra-industry trade; and (5) export specialization.

Chart 4: **Poland's export value (left panel) and geographic structure (right panel).**
Source: World Bank, The Observatory of Economic Complexity.



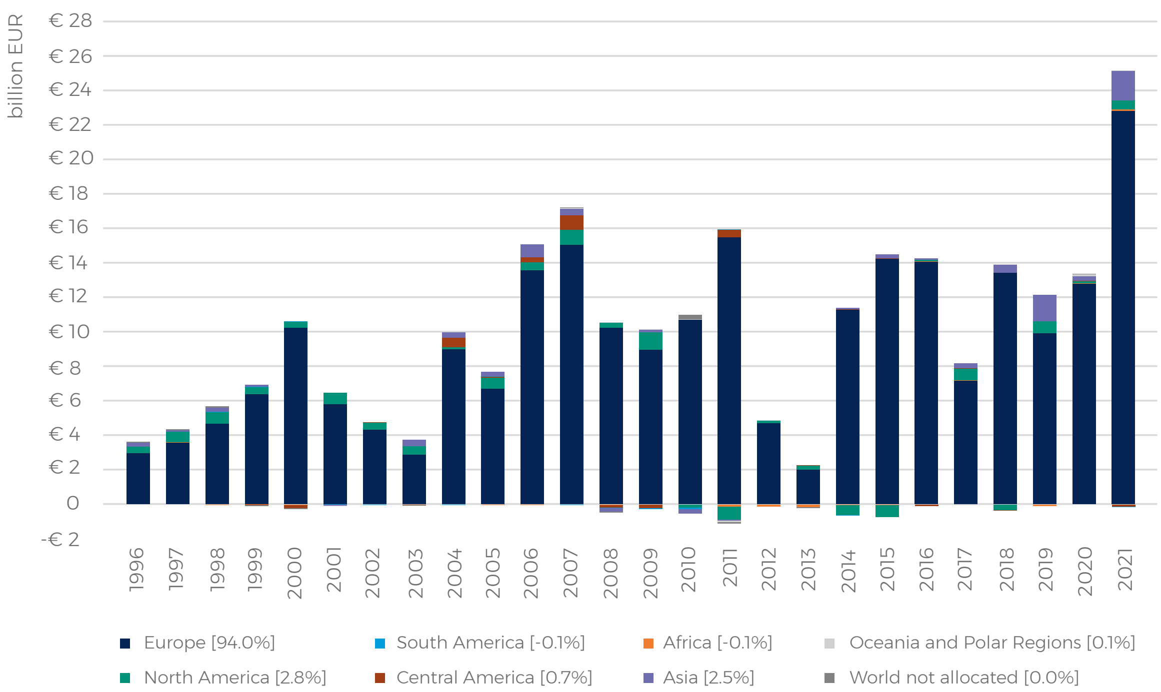


In the case of Poland, nominal trade turnover was growing dynamically, mainly as a result of globalization and the liberalization of world trade since the 1990s, but also due to exchanges within the free trade zone. In 1995, exports accounted for 23% of GDP, while today it is 62%. Nominally, it increased more than sevenfold (from USD 48 billion to USD 351 billion—at constant prices). Poland's accession to the EU brought the opportunity to participate in intra-EU trade, which meant the elimination of customs duties and quantitative restrictions on trade with other member states. As a result, participation in intra-EU trade has increased significantly (Chart 4), and Poland has become an integral part of Europe's supply chains. The EU market receives 88% of Poland's exports, nominally its value (at constant prices) has increased more than 13 times over the past 25 years. Since 2013, Poland has been a net exporter (recording trade surpluses), averaging 2.6% of GDP from 2013 to 2022. However, this has required adjustment and the search for comparative advantages. From an international perspective, Polish exporters produced cheap products at a low cost by making them competitive with foreign customers. As much as 78% of exports are processing industry goods (EU27 average: 70%). The structure of Polish exports is dominated by machinery, mechanical equipment and its parts (13.4% data for 2021, The Observatory of Economic Complexity—Export, Poland), electrical machinery and electronics (12.4%), cars, tractors, trucks and their parts (9%), as well as steel, iron and products made from them (5.5%), construction components and furniture (5.4%), and plastic articles (4.9%). Germany is the undisputed and largest trading partner for Poland. It is the destination of 27.7% of Polish exports. Important trading partners, but with smaller export shares, are the Czech Republic (5.9%), France (5.7%), the United Kingdom (5.2%), and Italy (4.7%). Exports to the US and China account for 2.8% and 1.2%, respectively. Ukraine has its 2.2% share, but this may increase in the coming years given the country's post-war reconstruction and greater integration with European countries (including neighbouring Poland). As much as 87.7% of Polish exports go to European countries, which clearly shows the benefits of belonging to the preferential trade zone. Other destinations for Poland's goods exports include Asia (5.9%), North America (4.1%), Africa (1.3%), South America (0.5%) and Oceania (0.5%). Poland's accession to the EU common market has brought many trade-related benefits: an increase in exports and imports, the development of intra-EU trade, an improvement in the balance of trade, the development of intra-industry trade, and a more balanced and competitive export structure—in Poland this is mainly oriented toward processing industry products.

Poland's accession to the EU common market has brought many trade-related benefits.

Integration into the EU common market has brought significant benefits related to the inflow of foreign direct investment. Companies from EU countries have more confidence to invest in a country that is becoming part of the common market. Over the past 25 years, as much as 94% of foreign direct investment inflows to Poland have come from European countries, with an increase seen in nominal terms after 2004 (Chart 5). Poland, like other Central and Eastern European countries, competes internationally with low labor costs, an educated workforce and a (relatively) stable institutional environment. Investment attractiveness is supported by a relatively cheap currency, which is an additional incentive for foreign investors' decisions. With the foreign direct investment and the opening of the economy to foreign capital, Poland benefits from the transfer of knowledge and technology, the creation of new jobs, increased competitiveness, the development of key sectors and the know-how of management processes.

Chart 5: **Inflow of foreign direct investment to Poland by region of origin of capital (billion EUR).**
Source: National Bank of Poland.



Finally, European Funds should be mentioned. Poland could benefit from EU structural and cohesion funds. Assets from the funds helped finance infrastructure investments (as well as developmental, social, educational, and innovative ones). Thanks to these funds, there has been modernization and alignment with more developed countries. The balance of transfers between Poland and the European Union between 2004 and 2021 (until the end of November 2021) is positive for Poland, amounting to nearly EUR 141.8 billion.

European funds were largely used for infrastructure development, expanding access to common European infrastructure. At the same time, Poland was developing and modernizing its own infrastructure (see section by Patryk Wild entitled Rozwój infrastruktury). Common transport infrastructure (roads, railroads, airports), energy infrastructure (gas pipelines) or communications infrastructure (digital, internet) have connected Poland more tightly with other member states, improving cross-border communications and transportation. Thanks to this, Polish regions were connected with Europe in an economic context.

2.4. Major challenges

The process of Poland's accession to the European Union, as well as membership itself, entailed certain costs that the Polish state and economy had to bear. In many cases, these were non-negotiable and pre-imposed measures. However, they often came with concomitant benefits.

During preparations for accession, Poland incurred adaptation and adjustment costs because it had to carry out structural reforms and adapt its legislation to EU standards. This process involved the cost of implementing new regulations and modernizing infrastructure, as well as reorganizing many sectors of the economy. Poland had to adapt its standards and norms to EU requirements, which, on the one hand, brought significant benefits in many dimensions and the long term, and on the other hand, required many changes and efforts.

The EU's internal market required Polish companies to adapt to the principles of the free movement of goods and services. This meant harmonizing technical standards so that Polish products could be sold throughout the EU without having to meet various local regulations. In the agricultural and food sectors, Polish companies have been subject to EU regulations on food safety and animal health (food quality control standards, animal identification and registration system). In addition, it was necessary to adapt the country to EU standards for occupational health and safety, to ensure adequate working conditions for employees and minimize the risk of accidents. EU regulations on labor and social rights required Polish companies to provide adequate working conditions, minimum wages and social security for workers.

Polish companies had to adapt to EU financial regulations, such as accounting standards or financial reporting requirements aimed at increasing transparency. They were also required to bring their business practices in line with the principles of EU antitrust law, while Polish authorities were obligated to learn how to detect monopolistic practices and other forms of competition violations. In this context, the telecommunications market was deregulated, opening it up to new companies.
In the case of the standardization of products and services, entrepreneurs had to adjust their products in terms of quality, safety and consumer health protection. In the food sector, for example, manufacturers had to meet strict standards for composition, labeling and production hygiene for products to be sold freely in EU markets. EU regulations on environmental protection required Polish companies to adapt their operations to standards for emissions, waste management or energy efficiency (modernization of the energy sector to reduce $CO2$ emissions, introduction of new emission standards in the automotive sector, thermal efficiency improvement in buildings).

Poland had little influence on the shape of the EU's existing standards, meaning that, in many cases, they were imposed, and negotiations were only possible on some sensitive issues. As a result of its integration into the EU, Poland had to open its market to competition from member states. In many cases, this resulted in problems for domestic companies related to their lower competitiveness against imported products and services. Companies had to adapt to competition in the EU single market, which meant pressure to improve their offerings and forge their own niche in the common market. While Western countries often specialize in the production of high-value-added products with recognizable brand names, the Polish niche may be the production of high-quality generic goods at an affordable price.

The possibility of free movement within the EU resulted in the emigration of skilled workers, the so-called brain drain, that is, the emigration of well-educated people to more developed countries. This caused deficits in certain groups of specialists in the domestic labor market. After almost 20 years of EU membership, a halt to the large-scale outflow of labor from Poland is evident in the statistics, and the development of the economy as a whole and investments in innovative projects have made Poland a destination for the immigration of an increasing number of specialists.

The EU market has opened Poland to competition in the agricultural sector, which has affected the country's decline in agricultural production. On the one hand, it was a natural result of structural transformations in a developing economy in which the workforce is shifting toward services. On the other hand, it should be acknowledged that Western Europe's more advanced, high-volume farms were putting the Polish agricultural sector at a disadvantage.

To redress regional inequalities, Poland uses the European Regional Development Fund.

EU accession, as well as globalization, has also exacerbated regional inequalities. There has been rapid development of agglomerations around large cities (Warsaw, Kraków, Gdańsk, Poznań). They attracted a lot of investment, and there were strong migration trends toward them at the expense of poorer regions. To redress regional inequalities, Poland uses the European Regional Development Fund, including the European Funds Program for Eastern Poland, which aims to accelerate the development of the six voivodeships of Eastern Poland and consolidate conditions conducive to economic competitiveness and a higher quality of life.

During the period of EU membership, Poland became a net beneficiary of structural funds, which meant both financial benefits and the need to use these funds properly (own contribution, timely settlements). This entailed additional administrative expenses in the form of increasing staff and undergoing training. This also, however, increased the management competence of personnel.

3. Recommendations for Ukraine

The process of Poland's accession to the European Union meant several years of effort, resulting in the achievement of a strategic goal: membership in one of the world's most important economic and political blocs and one of the world's largest markets. Poland has taken numerous measures to meet EU requirements and achieve European standards. Many international agreements and treaties were concluded, internal institutions were created to support the economic transition, and bodies were established to streamline the adjustment processes. Ukraine can draw the following lessons from Poland's experience in the context of its own accession process:

1 Institutional reforms should include improving the business environment by increasing the ease of doing business, an effective judicial and tax system, and strengthening corporate governance and competition law. They should also include the implementation of appropriate anti-corruption mechanisms, including independent audit and inspection bodies, electronic management and monitoring systems, and a whistleblower protection system.

2 Supporting entrepreneurship by creating a friendly environment for entrepreneurs by simplifying procedures for starting, operating and closing businesses (including reducing licensing obligations and streamlining bankruptcy procedures); creating boosts for private investment, such as through attractive tax incentives; providing access to loans and financing; developing public-private partnerships; and initiating training and education programmes to support the development of entrepreneurial skills.

3 International cooperation to build constructive relations with member states, EU institutions and alternative mechanisms of regional cooperation as early as possible. International cooperation allows for effectively promoting one's own interests and achieving positive results in accession negotiations. This makes it possible to gain support—and endorsements—and learn from the experiences of other countries. For companies and businesses, it is an opportunity to grow and learn know-how from other countries.

4 Social development and education will not be possible to improve living standards without systematic improvement of competencies by society. In terms of accession, an important element is education and communication with the public about the benefits, challenges and goals of EU accession. Civil society should be aware of and involved in the integration process. Investment in education at all levels of teaching is becoming a key tool for building a smart society, which is a key factor in increasing competitiveness on the European stage.

5 Specialized bodies support reforms. In Poland, institutions have been set up to organize, coordinate and monitor the progress of the integration process, including the European Integration Committee with its Office or the Team for Negotiating Poland's Membership in the EU.

6 Pre-accession funds—currently, adjustment funds are available for applicant and candidate countries under:

- Instrument for Pre-accession Assistance (IPA)—operating on five levels (transition assistance and institutional strengthening, cross-border cooperation, regional development, human resources, and rural development).

In addition, the country may benefit from aid funds from the EU as part of Ukraine's reconstruction assistance:

- Repurposing ongoing projects worth up to EUR 200 million—to provide emergency assistance to meet the urgent needs of the Ukrainian population and authorities;

- State and Resilience Building Contracts (SRBC) worth EUR 120 million—budget support as part of the aid package. It aims to strengthen civilian preparedness and crisis management at both the central and local levels. This will contribute to further reducing existing vulnerabilities to crises affecting society as a whole, as well as critical infrastructure, including the transportation network, information and communications systems;

- An emergency support programme worth EUR 330 million—assistance to internally displaced persons and host communities, including housing and social services (about EUR 200 million). Emphasis will also be put on rebuilding critical infrastructure, possibly including energy facilities; support for digital security and cyber security is also planned. The programme will also support independent media and civil society;

- The Ukraine Facility—to support the rebuilding, reconstruction and modernization of Ukraine. EUR 50 billion will provide Ukraine with consistent, predictable and flexible support between 2024 and 2027, tailored to the unprecedented challenges of supporting a country engulfed in war.

References

Act of 8 August 1996 on the European Integration Committee. Journal of Laws 1996.106.494.
http://orka.sejm.gov.pl/proc2.nsf/ustawy/1433_u.htm.

Agreement between the People's Republic of Poland and the European Economic Community on trade and commercial and economic cooperation. Journal of Laws 1989.38.214.
https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU19900380214/O/D19900214.pdf.

Balcerowicz, L. (1997). *Socjalizm, kapitalizm, transformacja. Szkice z przełomu epok.* Wydawnictwo Naukowe PWN.

Blok, Z. (2006). *Transformacja jako konwersja funkcji wewnątrzsystemowych na przykładzie Polski.* Wydawnictwo UAM.

Bożyk, P., Misala, J. (2003). *Integracja ekonomiczna.* Polskie Wydawnictwo Ekonomiczne. European

Commission. (current year). *Overview - Instrument for Pre-accession Assistance.*
https://neighbourhood-enlargement.ec.europa.eu/enlargement-policy/overview-instrument-pre-accession-assistance_en.

European Commission. (current year). *Ukraine – Membership status: candidate country.*
https://neighbourhood-enlargement.ec.europa.eu/european-neighbourhood-policy/countries-region/ukraine_en.

European Integration Committee. (1997). *Narodowa Strategia Integracji.*
https://oide.sejm.gov.pl/oide/images/files/dokumenty/narodowa_strategia_integracji.pdf.

Government Statement of 23 December 1993 on the entry into force of the Europe Agreement establishing an association between the Republic of Poland, of the one part, and the European Communities and their Member States, of the other part, prepared at Brussels on 16 December 1991, Journal of Laws 1994.11.39.
https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/wejscie-w-zycie-ukladu-europejskiego-ustanawiajacego-stowarzyszenie-16795743#:~:text=O%C5%9AWIADCZENIE%20RZ%C4%84DOWE,grudnia%201991%20r.

Interim Agreement on trade and trade-related matters between the Republic of Poland and the European Economic Community and the European Coal and Steel Community, prepared at Brussels on 16 December 1991. Journal of Laws 1992.17.69.
https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/umowa-przejsciowa-dotyczaca-handlu-i-spraw-zwiazanych-z-handlem-16794591.

National Programme for the Preparation for Membership of the European Union. (1998).
https://orka.sejm.gov.pl/Rejestrd.nsf/0/CB478BA562586329C125685D003B1867/$file/1194-1.pdf.

PolskawUE.gov.pl. (15 January 2010). Negotiation team.
https://web.archive.org/web/20131109232040/http://polskawue.gov.pl/Zespol,negocjacyjny,503.html.

The Court's Opinion 2/94 of 28 March 1996
https://curia.europa.eu/arrets/TRA-DOC-PL-AVIS-C-0002-1994-200407019-05_00.html.

Contents

WiseEuropa

INDUSTRIAL POLICY FOR FUTURE UKRAINE

How can Ukraine successfully industrialize and decarbonize at the same time?

Maciej Bukowski

Summary

- Industrialization plays a pivotal role in economic growth. It fosters technological advancements, boosts labor productivity, and diversifies the economy beyond its reliance on primary sectors, such as agriculture and raw materials. Accordingly, industrialization played a significant role in the rapid economic growth of Poland and other Central and Eastern European states during the 1990s. These countries capitalized on their low labor costs and proximity to Western Europe to develop export-oriented industries, including automotive, chemicals, electronics and electrical equipment, food and beverages, and household appliances.

- Since 1990, Poland's industrial production has experienced a remarkable seven-fold increase, an achievement only surpassed globally by Turkey and China. Over the last thirty years, the Polish experience has provided strong evidence that globalization has a transformative impact on the way that countries industrialize. During this period, technological advancements have fundamentally changed global manufacturing, leading to lower-cost transportation and coordination, and enabling the formation of global value chains. Those countries that, like Poland, quickly liberalized their economies and integrated with global trade networks, have managed to successfully increase their industrial production, and have experienced strong economic growth.

- A successful industrial policy for Ukraine may involve a set of strategic, proactive measures that will—to a large extent—follow the Polish example while adjusting to the new circumstances that arise from the changing global order. Such a policy may include:

    - Strategic Planning: A clear vision of the industry's development path, with objectives and timelines are clearly defined. The strategy should prioritize the overall growth of industrial production rather than of specific sectors or branches.

    - Regulation and Oversight: Transparent regulations ensure that industries operate in a manner that is safe, sustainable, and fair. This should involve judiciary, business registration, labor laws, and environmental standards as well as regulations related to product safety and quality.

    - Incentives and Subsidies: Ukraine may provide financial incentives, such as tax deductions, subsidies, or low-interest loans, to stimulate industrial investment. FDIs should be prioritized—especially in the early phase of industrialization—to inject necessary capital and know-how into the Ukrainian economy.

- Investment in Infrastructure: Reliable, efficient infrastructure (e.g., roads, ports, telecommunications, and utilities) is critical for industrial growth. Ukraine should prioritize the development of interconnectivity with the EU and, in particular, with Poland, in a similar way that Poland prioritized interconnectivity with Germany.
- Human Capital Development: Education, training, and workforce development programs are key to supplying industries with the skilled workers they need.
- Assuring Access to Finance: Ukraine can foster industrial competitiveness by strengthening the access of domestic enterprises to finance. This may require the establishment of a suitable set-up of institutions responsible for the support of industrial restructuring, machine park modernization, and innovativeness.
- Inclusive and Sustainable Development: An effective industrial policy also includes measures to ensure that the benefits of industrial development are widely shared, and that the industry operates in a sustainable manner. This might involve programs to create jobs, support for SMEs, or regulations to reduce environmental impact.

- A particular challenge for Ukraine might arise from the need to balance industrialization with decarbonization. The measures used by Ukraine to balance these objectives include a shift towards renewable energy, robust policies and regulations (e.g., portfolio standards, carbon pricing mechanisms, emissions standards for vehicles and for industrial processes, incentives for green technologies), energy efficient technologies, awareness raising campaigns, and green finance.

1. Introduction

Industrialization plays a pivotal role in economic growth, fostering technological advancements, boosting labor productivity, and diversifying the economy beyond its reliance on primary sectors such as agriculture and raw materials. This diversification enhances economic stability by reducing reliance on a narrow range of activities, shielding the economy from idiosyncratic shocks in the long run. Moreover, industrialization alleviates underemployment, leading to improved living standards and higher incomes. As individuals earn more, their spending power increases, further propelling economic growth and industrialization. Additionally, industrialization creates jobs directly in manufacturing and related services, while indirectly stimulating employment in other sectors that benefit from the overall rise in income. Moreover, countries with strong manufacturing sectors tend to exhibit greater economic resilience and macroeconomic stability, as their industrial output generates export earnings, enhances foreign currency reserves, and improves the trade balance.

It is, therefore, unsurprising that industrialization played a significant role in the rapid economic growth of Poland and other Central and Eastern European (CEE) states following the 1990s. These countries capitalized on their low labor costs and proximity to Western Europe to develop export-oriented industries, including food and beverages, automotive, chemicals, electronics and electrical equipment, and household appliances. Since 1990, Poland's industrial production has experienced a remarkable seven-fold increase, an achievement only surpassed, globally, by Turkey and China. This success was attributed to substantial foreign direct investment (FDI) inflows and the development of domestic industries, which propelled Poland to become a major exporter and achieve industrialization levels comparable to the European Union (EU) average.

In contrast, Ukraine's transition from a centrally planned economy to a market-oriented one was less successful, particularly as the country was also undergoing a difficult transformation following the collapse of the Soviet Union in 1991. Unlike Poland, Ukraine's economy failed to undergo substantial structural reforms, remaining heavily reliant on traditional industries such as steel, coal, and agriculture. These industries faced declining demand and competitiveness in global markets, hindering Ukraine's ability to diversify its economy and move into higher-value industries.

This chapter delves into the structural and institutional underpinnings that have shaped the divergent development trajectories of Poland and Ukraine since 1990. We commence by outlining the pivotal economic reforms undertaken by Poland during this period. Elucidating their impact on the remarkable surge in industrial production, we then identify the impediments that may have hindered Ukraine's ability to replicate this path. The chapter concludes with policy recommendations aimed at fostering a conducive business environment and expediting industrial advancement in Ukraine.

2. Industrial development and reforms in Poland 1990–2022

2.1. Challenges of the late 1980s

In the late 1980s, Poland, alongside other Central and Eastern European (CEE) socialist countries and the Soviet Union, grappled with stagnant economic growth, depreciated physical capital, and widespread shortages of essential goods. At the root of these issues lay the inherent flaws of central planning – a system that prioritized ideological objectives over market incentives. The state of the Polish economy in the late 1980s was, primarily, shaped by decisions made four decades earlier, in the aftermath of World War II, when Soviet-style industrialization disproportionately favored heavy industries like mining, steel, and military equipment, while neglecting the production of consumer goods such as textiles, furniture, and food products. Moreover, the absence of market signals prevented the alignment of production with consumer demand, leading to the misallocation of resources and the creation of products that did not resonate with consumer preferences. To compound the issue, politically motivated incentives further undermined economic outcomes, even within industries favored by central planners. While functioning as economic entities, state-owned enterprises (SOEs) were also expected to accommodate the demographic surpluses that were a result of the 1950s' baby boom. This led to substantial overemployment and extremely low productivity among socialist enterprises in the 1980s. The absence of competition and the lack of profit-driven motives resulted in significant wastefulness and poor-quality manufacturing output. It was unsurprising then that industrial goods produced by socialist countries – including Poland – were uncompetitive on the international stage and poorly received by domestic consumers. Exports to Western Europe were, primarily, limited to basic commodities, although – in contrast to the Soviet Union, which pursued a much higher degree of economic autarky – CEE countries and Poland engaged in extensive trade within the socialist bloc.

The absence of competition and the lack of profit-driven motives resulted in significant wastefulness and poor-quality manufacturing output.

Polish communist governments recognized these chronic problems and attempted to address them through piecemeal economic reforms in the 1980s. They sought to decentralize decision making by gradually phasing out the central planning system and granting more autonomy to individual enterprises, hoping this would improve their responsiveness to consumer demand. Limited liberalization was also introduced, allowing enterprises to retain profits, determine production levels, and set producer prices for a larger share of their products. However, despite multiple attempts, the liberalization of consumer prices never materialized, as the Polish United

Workers Party feared that it could lead to public unrest. Instead, Polish communist governments in the 1980s focused on rationalizing and restructuring the most inefficient enterprises through mergers or closures of unprofitable units. To alleviate shortages and improve the trade balance, they permitted the creation of small private firms in selected sectors and allowed for the formation of joint ventures with foreign investors. Additionally, efforts were made to establish a market-oriented banking system, with the hope that commercial banks would play a more active role in financing and supervising SOEs, fostering greater economic rationality in investment decisions. Several commercial banks were separated from the structures of the National Bank of Poland and began independent operations.

While these reforms represented significant steps in the right direction, they were often half measures.

While these reforms represented significant steps in the right direction, they were often half measures, lacking the decisiveness necessary for a genuine transformation. By 1988, there was a growing realization among the Polish communist leadership that the expected results were not being achieved and that more radical measures were required. This led to the Round Table Talks between the communist party and the democratic opposition. Simultaneously, the last non-democratic government of Mieczysław Rakowski undertook significant political and economic reforms that paved the way for the semi-free elections in June 1989 and laid the foundations for the establishment of a market economy in the 1990s. These reforms included the liberalization of most (although not all) producer and consumer prices, which caused hyperinflation, but simultaneously alleviated the substantial shortages that had plagued the Polish economy for the previous 15 years.

The most critical reform of the Rakowski government, however, addressed the supply-side challenges of the socialist economy. This reform, known as the Wilczek Law, was named after its main proponent, Polish entrepreneur Mieczysław Wilczek. The law substantially simplified the process of establishing and registering private enterprises, making it possible to start a business with minimal formalities. It also eliminated employment restrictions, allowing private firms to employ an unlimited number of workers and expand. In addition, the range of activities that private entities could engage in was vastly expanded, breaking away from the previous practice of stringent state control over entrepreneurship. The Wilczek Law unleashed a surge in new business establishments within the months following its enactment in late 1988. This marked a significant departure from the other socialist countries, where the private sector was still largely marginalized. Symbolically, it represented a recognition by the Polish – still formally communist – authorities of the need for further market-oriented reforms and the role that private enterprise should play in revitalizing the country's economy. This reform can be seen as a precursor to the broader reforms that Poland undertook in subsequent years under the leadership of first non-communist prime minister Tadeusz Mazowiecki and was continued by other democratic governments in the 1990s.

Main stages and elements of Polish economic reforms and industry developments 1980–2020

1980s: Preparatory, partial reforms under socialism

1 Partial reforms: Partial reforms included SOEs' autonomy, initially gradual and later rapid price liberalization, and some banking reforms.

2 Diminishing state control over the economy: The red tape was gradually cut and the widespread private entrepreneurship in Poland (Wilczek's Law) began.

1990s: Democratization and rapid transition to a market economy

3 Liberalization and regulatory reforms: The liberalization of prices and trade opened Polish manufacturing to global competition. Regulatory reforms established approximately modern institutional framework for industrial activity in Poland.

4 Restructuring and privatization of SOEs: Enterprises underwent restructuring, which often involved downsizing, modernization, and management changes, in particular, in heavy industry promoted by the socialist model of industrialization. There was widespread privatization (international companies but also domestic investors, Warsaw Stock Exchange).

5 Focus on export and FDIs: Poland started to attract FDIs, especially in food processing, household appliances, consumer electronics, machinery and automotive. It began focusing on export markets, integrating with global supply chains. Many domestic manufacturing enterprises started to grow their operations from scratch.

2000s: EU Accession, investment, and manufacturing boom

6 EU Membership: Negotiations with the EU and introduction of EU standards to the Polish legal system. Accession to the EU in 2004 further integrated Poland into European markets, leading to an increase in trade and investment. In preparation for EU accession, Polish manufacturers had to align with EU technical and environmental standards.

7 Investment in Infrastructure: Significant investments were made to modernize infrastructure (funded by the EU and later by domestic taxes), with particular focus on transportation (roads, harbors, railways, airports etc.) and IT networks.

8 Supply chain integration: Polish manufacturers began adopting international quality standards, such as ISO certifications, to compete internationally. They became integral parts of European and global supply chains.

2010s: Continued growth and challenges

9 Promotion of high-value manufacturing: There was a shift toward high-value manufacturing, including electronics and aerospace components. Efforts to develop a skilled workforce were intensified to meet the demands of advanced manufacturing.

10 Innovation and sustainability: Polish enterprises (both international and domestic) have started to invest in smart manufacturing technologies and automation to enhance competitiveness. The focus has increased on research and development (R&D) and innovation to move up the value chain. There has been an ongoing focus on sustainable manufacturing practices, including energy efficiency, waste reduction and renewables.

Source: Eurostat

2.2. The reforms of the 1990s and industrial development

Macroeconomic stabilization

During the 1990s, the pivotal economic reform initiative in Poland was the Balcerowicz Plan, named after its architect, Leszek Balcerowicz, who served as Deputy Prime Minister and Finance Minister in the Mazowiecki government. The plan adopted a radical shock therapy approach, swiftly transitioning the Polish economy from a centrally planned system to a market-oriented one. While the plan primarily focused on macroeconomic stabilization measures, many of its elements played a significant role in shaping future industrial developments. The escalating public debt and unsustainable deficits posed a major challenge, fueled by inefficient state-owned enterprises and a bloated public sector. To address this issue, the government implemented fiscal consolidation measures, including phasing out subsidies to SOEs, reducing public sector employment, and overhauling the tax system to enhance revenue collection. Existing taxes were modernized, and new ones were introduced, including Value Added Tax (VAT). Simultaneously, nearly all remaining price controls were dismantled, and the Polish złoty was devalued to align its value closer to market rates. This move incentivized production for both the domestic and export markets, as domestic producers could now charge market-driven prices, while export competitiveness improved due to the devalued złoty. To combat the hyperinflation that had emerged following the 1988 price liberalization, the government granted independence to the central bank, providing it with greater autonomy to manage monetary policy. Additionally, a cap was placed on excessive wage increases, ensuring that wage growth was linked to real productivity gains, thereby curbing inflationary pressures.

Industry restructuring and privatization

The overarching challenge lay in enhancing decision-making processes within state-owned enterprises (SOEs) and, thereby, boosting productivity across the industrial sector and the economy as a whole. To achieve this, the "Privatization Act" of 1990 was enacted, and the newly established Ministry of Ownership Changes, under the leadership of Krzysztof Lis, began restructuring SOEs in preparation for privatization. Two primary privatization models were introduced: direct sale to private entities (domestic or foreign) and indirect sale to Polish citizens (mass privatization). Direct privatization typically involved negotiations with investors or listing the company's stock on the newly established Warsaw Stock Exchange (WSE) in 1991. This approach provided a transparent platform for trading shares of privatized companies and facilitated capital raising for private enterprises. Direct privatization was primarily employed for larger SOEs. Smaller enterprises were either directly sold to foreign investors, employees, or managers; or, if insolvent, they were liquidated, and their assets (real estate, machinery, brands, etc.) were sold to domestic private entrepreneurs. Indirect privatization took the form of the National Investment Funds (NIFs), into which shares of, approximately, 500 companies were distributed. Polish citizens received free vouchers that could be exchanged for shares in these NIFs. By 1995, around 15 million Poles owned shares in NIFs listed on the WSE. By the mid-1990s, the privatization process had gathered significant momentum, and substantial restructuring efforts were underway, particularly in the mining and steel industries, but also in other manufacturing sectors

Key pillars of Polish macroeconomic reforms in the 1990s

1 **Macroeconomic stabilization:** In the early 1990s, Poland faced hyperinflation, negative external balance, large public deficits, and unserviceable indebtedness in foreign currencies. Poland responded to these challenges by introducing strict monetary and fiscal policies and successfully negotiating for debt relief with IMF and private creditors.

2 **Tax Reforms:** Tax reforms were implemented to efficiently raise public revenues and make the tax system more favorable for private enterprises. Indirect taxes (VAT, excise duty etc.) formed the foundation of public finances, whereas direct taxes (PIT and CIT) were designed to encourage labor and investments (internationally competitive rates).

3 **Liberalization of the Economy:** The government established a legal and regulatory framework conducive to private business, including laws on company registration, property rights and contract enforcement. Poland liberalized its economy, removing many of the state controls that existed during the communist era. This included deregulating prices, liberalizing trade, and easing restrictions on private business activities.

4 **Privatization of State-Owned Enterprises:** A major component was the large-scale privatization of state-owned enterprises. This was done through various means, including public offerings, direct sales, and management–employee buyouts, thereby creating room for private entrepreneurship.

5 **Labor Market Reforms:** Reforms in labor laws were made to increase flexibility in the labor market, making it easier for new businesses to hire and manage employees. Various programs (active labor market policies) were launched to provide entrepreneurs with training and development opportunities, thereby enhancing their skills and knowledge.

6 **Access to Finance:** Access to finance was improved through the development of the banking sector and capital markets. Overhauling the banking sector to make it more robust and reliable, including the establishment of a modern banking system with the participation of foreign banks, was a key part of the success in this area.

7 **Foreign Direct Investment (FDI):** The government actively encouraged FDI, which not only brought capital, but also technology and management expertise. Special Economic Zones offering tax incentives and other benefits were established to attract foreign investors especially to the regions most affected by industry restructuring.

8 **Support for Innovation and Technology Transfer:** Efforts were made to support innovation and technology transfer, including the establishment of technology parks and incubators, to boost the competitiveness of Polish enterprises.

9 **International Integration:** Poland's efforts to integrate into the European and global economy (IMF and World Bank membership, OECD membership, NATO membership) also created opportunities for entrepreneurs to access larger markets and participate in global value chains. Steps toward EU accession reassured investors of political stability and policy continuity.

Source: Own elaboration

Subsidies were gradually phased out, compelling SOEs to become financially self-sufficient and prioritize efficiency and profitability. In the early 1990s, many SOEs grappled with overstaffing, a legacy of the full employment policies of the communist era. Industrial restructuring often necessitated the closure of the most underperforming entities and painful job cuts in others. These measures were crucial for reducing costs, improving productivity, and stabilizing the financial positions of the enterprises, but simultaneously led to significant social challenges. In the coal mining sector, employment cuts were accompanied by a decline in coal production as the most inefficient mines with poor geological prospects were shuttered. As a result, unemployment rates soared to 10% and even 20% in the most-affected areas, significantly exacerbating poverty levels. Recognizing these hardships, in the 1990s, Polish governments implemented measures to safeguard the most vulnerable segments of society, including unemployment benefits and early retirement programs for older workers. Efforts were also directed towards engaging in social dialogue with trade unions and worker representatives to negotiate the terms of restructuring and ensure support for affected workers. The Industrial Development Agency – Agencja Rozwoju Przemysłu (ARP) – an institution dedicated to the restructuring of SOEs, provided financial assistance, advisory services, and asset management support to facilitate the restructuring process.

How did Poland restructure its legacy industries such as coal mining and steel making?

To mitigate the social impact of lay-offs in legacy industries including (but not only) coal mining and steel sector, during the 1990s and early 2000s, Poland implemented several protection measures such as:

1. **Early Retirement Schemes:** Special early retirement schemes were introduced, allowing older workers to leave the workforce before the standard retirement age. In the cases of heavy industry and, especially, coal mining, the benefits exceeded significant pensions that were granted in other sectors.
2. **Unemployment Benefits:** The government offered enhanced unemployment benefits to those who lost their jobs due to industrial restructuring. They were relatively low (30% of wage) but, at the same time, were easily accessible to all that lost their employment.
3. **Severance Packages:** In the coal mining and steel sectors (but not in other industries), workers who were laid off as a result of restructuring were offered generous severance packages (equivalent of 2–3-year salaries) to provide support during their transition to new jobs.
4. **Retraining Programs and Job Placement Services:** State employment agencies were established to help displaced workers find new jobs. Alongside job placement, these agencies offered extensive retraining and upskilling programs to help the unemployed to gain new skills relevant to the rapidly changing economy and find employment in new industries.
5. **Regional Diversification Programs:** Dedicated regional development programs were introduced to support the economic diversification of regions heavily dependent on the restructured sectors. They aimed at creating new job opportunities in new private enterprises. This included the establishment of Special Economic Zones that offered tax incentives and reduced bureaucracy to attract new businesses, especially in the form of FDIs.

Source: Own elaboration

Business climate reforms

Mobilizing industrial investments was critical for Poland's economic growth after 1989. They were supported by banking sector reforms, which, in the early 1990s, involved the capitalization of the sector, its consolidation, privatization (through the Warsaw Stock Exchange), and rapid modernization of its operations. The government sought to equip the economy with an efficient financing mechanism for decentralized, private investments. Furthermore, through its development bank (Bank Gospodarstwa Krajowego – BGK), the state offered special credit lines and loan guarantees to support small and medium-sized enterprises (SMEs).

Apart from this, a series of measures were implemented to create an attractive and conducive business climate. This included the abolition of import licenses and a significant reduction of customs duties, integrating Poland into the global, and particularly the European, economy. The hope was that the removal of trade barriers, coupled with low wages, would incentivize investment, helping the economy recover quickly. This same reasoning underpinned the introduction of numerous market-oriented laws, including amendments to the commercial code that significantly strengthened private property rights, contract enforcement, investment protection, and market competition between private and state-owned enterprises.

Through its various departments, The Ministry of Economy was responsible for formulating and implementing business-friendly regulations. It continuously worked on developing and refining policies to create a conducive environment for the industry, including tax policies, investment incentives, and regulatory reforms. Among others, the Ministry cooperated with various chambers of commerce and industry associations, which provided it with sector-specific knowledge and information. It also addressed the restructuring challenges of legacy sectors such as coal and steel.

Case study: Restructuring of the steel sector in Poland

The state, which until the beginning of the last decade owned most of the steelworks in the country, had a key role in carrying out and setting the direction for the restructuring of the Polish steel industry. Under the cover of the Metallurgical Social Package, steel sector employment was halved over the course of just three years.

Steelworks continued to modernize production, but their fragmentation and limited availability of funds constrained productivity and competitiveness. Therefore, a decision was made to consolidate and privatize the industry. The Act on the restructuring of the iron and steel industry was enforced in 2001 and, in 2002, the holding Polskie Huty Stali S.A. was established, bringing together four previously existing companies (Huta Katowice S.A., Huta T. Sendzimira S.A., Huta Florian S.A. and Huta Cedler S.A.).

In 2003, the holding was sold to Mittal Steel Company N.V., the largest steel producer in the world (currently – ArcelorMittal). At the same time, most of the remaining steelworks (e.g., in Stalowa Wola) abandoned steel production and focused on activities with higher added value, such as steel processing or machine production. Over the next few years, the restructuring program was completed and state subsidies for the steel industry were withdrawn.

Source: Zatrudnienie w Polsce, 2010

To attract foreign direct investment (FDI), Poland established special economic zones (SEZs) that offered generous tax breaks, customs duty exemptions, and other incentives to manufacturing and export-oriented firms. These zones were particularly beneficial for enterprises investing in selected regions, often those with the most pressing labor market challenges, as they were granted reductions in corporate tax rates. Poland also, actively, pursued bilateral agreements aimed at encouraging and safeguarding cross-border capital flows.

A dedicated agency, the Polish Agency for Foreign Investment (PAIZ), later renamed the Polish Information and Foreign Investment Agency (PAIiZ), played a pivotal role in attracting FDI during the 1990s. Initially, PAIZ focused on facilitating the privatization of SOEs and promoting foreign investments in Poland across various sectors. As Poland's economy stabilized and became more integrated into the global marketplace, the focus of the PAIZ shifted. It began to prioritize attracting high-value greenfield investments and supporting sectors, such as technology, R&D, and high-end manufacturing. The PAIZ's efforts proved instrumental in attracting substantial FDI inflows into Poland, making it one of the most successful countries in Central and Eastern Europe in this regard. In 2017, the PAIZ was merged into the newly formed Polish Investment and Trade Agency (PAIH), which has continued and expanded upon the PAIZ's functions, including supporting Polish companies in their internationalization endeavors.

Key functions of PAIZ/PAIiIZ/PAIiH

1. **Promotion of Poland as an Investment Destination:** The agency was tasked with actively marketing Poland as a favorable location for FDIs. This involved showcasing Poland's economic strengths, emerging markets, and investment opportunities to investors.

2. **Providing Information and Consultation:** The agency served as a primary source of information for foreign investors on the Polish economy, legal regulations, and investment opportunities. It offered consultancy services to help investors understand the market, navigate regulatory environments, and make informed investment decisions.

3. **Assistance with Investment Process:** The agency played a hands-on role in assisting investors through the investment process. This included help with finding suitable locations, understanding and fulfilling legal requirements, and facilitating contact with relevant government bodies and local authorities.

4. **Improving business climate:** The agency functioned as a liaison between foreign investors, Polish businesses, and government bodies. It helped to establish connections and foster relationships that were beneficial for investment projects. It provided feedback to the government on how to improve the investment climate in Poland.

Source: Own elaborations based on PAIiH data

Rising environmental standards

A significant challenge faced by Poland was environmental pollution, as the socialist economy had largely disregarded the detrimental impact of industrial production on air, water, and soil quality. Simultaneously, the emergence of civil society in the 1990s witnessed the rise of non-governmental organizations (NGOs) dedicated to environmental issues, which played a crucial role in raising public awareness and advocacy. Consequently, a substantial portion of industrial restructuring in the 1990s involved investing in cleaner technologies to meet stricter environmental standards.

In 1991, the government introduced a comprehensive environmental legal framework, which included stringent regulations on air and water quality, waste management, and conservation. Fees levied on polluting companies were used to finance the newly established agency (the National Fund for Environmental Protection and Water Management), which began to support upgrades to water treatment facilities, waste management systems, and other industrial and municipal installations. The modernization of these facilities contributed to improved environmental quality.

Over time, Poland worked towards gradually raising its environmental standards to meet EU levels as part of its EU accession process. Additionally, the privatization and modernization of enterprises often involved adopting cleaner technologies and more efficient processes, while the restructuring or closure of mining and steelmaking significantly reduced the air and water pollution emanating from these heavy industries. (For more on environmental standards, see Prof. Zbigniew Karaczun's Environmental Protection in this volume)..

National Fund for Environmental Protection and Water Management

The National Fund for Environmental Protection and Water Management ("Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej" – NFOŚiGW), was established in 1989; the NFOŚiGW is a government fund aimed at financing and supporting environmental projects and initiatives. The role of the Fund from the early 1990s includes:

1. **Financial Support:** Since the beginning, the NFOŚiGW has provided financial support for environmental projects through grants, low-interest loans, and subsidies. This support is crucial for municipalities, businesses, and other entities that may not have the resources to invest in environmentally friendly technologies or infrastructure.
2. **Implementing Environmental Policies:** The Fund is a key instrument through which the government can implement its environmental policies. By channeling resources into targeted areas, the NFOŚiGW has helped to achieve national and (later) EU environmental goals.
3. **Encouraging Sustainable Development:** By supporting projects that align with sustainable development principles, the NFOŚiGW has encouraged a shift towards a more sustainable economy. This includes investments in renewable energy, energy efficiency, waste management, and water protection.
4. **Leveraging EU Funds:** The NFOŚiGW has also played a role in the distribution and management of EU funds allocated to Poland for environmental protection and water-management projects.
5. **Public Awareness:** Beyond providing financial means, the NFOŚiGW has participated in educational and informational campaigns to raise public awareness about environmental issues.
6. **Innovation and Technology:** The NFOŚiGW has supported the development and implementation of innovative environmental technologies, thereby fostering progress in eco-friendly practices.

Source: Own elaboration based on NFOŚiGW data

2.3 The reforms of the 2000s and their implications for industry

Adopting EU legal standards

In the late 1990s, Poland's overarching strategic goal was to join the EU. This process involved not only meeting the technical requirements of EU membership, but also a broader transformation of the entire Polish economy, integrating it into a larger and more competitive market. Substantial EU funds were anticipated to flow into Poland, facilitating the modernization of infrastructure and supporting capital accumulation within enterprises.

To secure EU membership, candidate countries are obligated to adopt the entire body of EU law and regulations, known as the acquis communautaire. Consequently, Poland embarked on a series of significant reforms, deemed crucial to gaining membership and establishing a favorable regulatory environment conducive to productive investments. These reforms were overseen by the Office of the Committee for European Integration (UKIE), which coordinated the efforts of various ministries and agencies, ensuring consistency and coherence in implementing the acquis. Dedicated EU coordination departments were established within ministries, tasked with aligning policies and legislation within their respective domains. For instance, the Ministry of Environment worked on harmonizing environmental laws, the Ministry of Economy focused on competition regulations, the Ministry of Justice worked on legal and judicial reforms, and the Ministry of Finance focused on harmonizing Poland's tax system and customs duties with the EU's common standards.

Certain sectors required comprehensive reforms to align with EU standards and enhance their competitiveness. The energy sector was required to comply with the EU's energy market regulations, the agricultural sector had to be restructured to align with the Common Agricultural Policy, and the telecommunications sector demanded de-monopolization and privatization. To address these challenges, accession reforms included strengthening competition laws and establishing independent regulatory bodies for the telecommunications (UKE – Urząd Komunikacji Elektronicznej), energy (URE – Urząd Regulacji Energetyki), and financial (KNF – Komisja Nadzoru Finansowego) markets. These bodies were entrusted with liberalizing previously state-controlled sectors, fostering competition, and regulating monopolies.

In the case of general manufacturing, Poland was required to establish systems for monitoring environmental quality and reporting to EU institutions, ensuring ongoing compliance with EU directives. The coordination of these systems was assigned to the General Inspectorate for Environmental Protection. Striking a balance between maintaining economic growth and adhering to stringent environmental standards was a challenging aspect of the transition, but it was effectively managed due to institutional capacity-building efforts undertaken in both the public (sectoral ministries) and private (individual companies) sectors. Compliance with EU law encompassed various industries, including food processing, financial services, automotive, and energy, but it was particularly demanding for mining and steel, necessitating publicly assisted restructuring. This restructuring, primarily concentrated in the late 1990s and early 2000s as EU accession talks reached their culmination, proved crucial for these industries. Despite these challenges, most Polish manufacturing sectors successfully integrated into European supply chains, becoming suppliers for larger companies in the EU and benefiting from the Common Market through a substantial increase in exports (for more on the Common Market, see Krzysztof Bocian's chapter Common Market in this volume).

Necessary adjustments in selected industries before EU accession

1 General Manufacturing:

- Raising Standards: Manufacturers had to upgrade their facilities and processes to meet EU environment, quality, and safety standards.
- Investing in Technology: There was a substantial investment in new technologies to increase efficiency, reduce costs, and improve product quality to cope with increased competition after accession.

2 Energy and Utilities:

- Environmental Standards: Energy companies had to invest in cleaner technologies to comply with EU environmental directives. By joining the EU, Poland pledged to accept the frames of EU energy and climate policy including decarbonization goals and market liberalization.
- Investing in Technology: There was a substantial investment in new technologies to increase efficiency, reduce costs, and improve product quality to cope with increased competition after accession.

3 Food Industry and Agriculture:

- Modernization and Restructuring: The sector underwent significant modernization. This involved upgrading equipment, adopting modern farming techniques, and restructuring farms to improve efficiency.
- Food Safety and Quality Standards: The food industry had to comply with high EU standards for food safety and quality, which included changes in production, packaging, and labeling.

4 Pharmaceutical and Healthcare Products:

- Compliance with EU Regulations: This sector had to align with stringent EU regulations concerning the development, testing, and marketing of pharmaceuticals and healthcare products.
- Research and Development: There was an emphasis on increasing R&D activities to compete in the EU market

5 Financial and Telecommunication Services:

- Banking: The banking and financial sector had to comply with the EU's regulatory framework, which included standards for capital adequacy, consumer protection, and anti-money laundering measures.
- Telecommunication: The telecommunications sector was open to competition and deregulated, which led to much larger investments – were necessary to upgrade infrastructure and cope with the rapid technological change in the industry.

Source: Own elaborations

Infrastructure development

A significant impediment to Poland's manufacturing competitiveness in the 1990s was its underdeveloped infrastructure. To address this issue, Poland embarked on a series of substantial public investment programs, with an annual allocation of over 3% of GDP for 20 years. These initiatives were carefully coordinated across various levels of government, guided by strategic documents adopted by the Council of Ministers. Key ministries, such as the Ministry of Infrastructure and the Ministry of Regional Development, played pivotal roles in planning, coordinating, and overseeing infrastructure development. They maintained close collaboration with EU institutions to ensure adherence to European standards and regulations.

EU funding was channeled through operational programs, each specifically targeting areas, such as infrastructure, environmental protection, and regional development. These funds were combined with domestic resources and private investment. The organizational aspects of infrastructure development were entrusted to specialized agencies, including the General Directorate for National Roads and Motorways (GDDKiA), which spearheaded the construction of an 8,000-kilometer motorway and expressway network between 2000 and 2030. Regional and local governments, in turn, assumed responsibility for developing the regional and local road network. In certain sectors, such as rail and energy supply, major investments were undertaken by state-owned enterprises. They financed these projects either from retained profits or through blended finance, which involved combining EU funds with banking loans. International financial institutions, such as the European Investment Bank (EIB), the World Bank, or European Bank for Reconstruction and Development (EBRD), provided financial assistance for specific projects, often in close partnership with domestic banks. (For more on this subject, see Patryk Wild's chapter Infrastructural Development in this volume.)

Labor market and education reforms

In addition to infrastructure development, EU funds supported three other crucial areas for the industry: reskilling of the labor force, human capital accumulation, and investments in machinery modernization or R&D. The Public Employment Services (PES), operating at the national and regional levels, spearheaded the labor force reskilling initiatives. They implemented Active Labor Market Policies (ALMPs) aimed at improving the efficiency of the labor market, reducing unemployment, and enhancing the employability of job seekers. PES offices provided a comprehensive range of services, including job placement, career counseling, vocational training, and support for self-employment and entrepreneurship. Initially (in the 1990s and early 2000s), the primary focus was on addressing unemployment, particularly among vulnerable groups such as the long-term unemployed, youth, and older workers. They aimed to encourage labor mobility and address regional disparities in employment opportunities. Later on (2010s and 2020s), greater emphasis was placed on vocational training and skills development to better align labor supply with market demand These programs were co-financed by Polish enterprises and EU funds, with the European Social Fund (ESF) playing a significant role.

Greater emphasis was placed on vocational training and skills development.

In the realm of vocational education, connections to the labor market were strengthened. This involved partnerships with businesses and a focus on practical skills. Curricula were updated to reflect current industry needs, including the incorporation of new technologies and skill sets. The establishment of partnerships between vocational schools and industries ensured that the training offered was current and aligned with industry requirements. A similar process unfolded at the university level. Poland became a participant in the Bologna Process in 1999, a major reform initiative aimed at harmonizing higher education systems across Europe. This involved adopting the three-cycle system (bachelor's, master's, and doctoral studies) and the ECTS credit system. Universities were granted greater autonomy, and quality assurance and accreditation systems were established to maintain high educational standards. Emphasis was placed on enhancing R&D within universities, fostering innovation and scientific progress. However, the underfunding of higher education and basic research remains an unresolved issue.

Strengthening investment support mechanisms

To facilitate machine park modernization and support economic growth, Poland continued to reform and enhance its financial sector, including the establishment and restructuring of public institutions that provided financing to the economy. These reforms aimed to create a more robust and diversified financial ecosystem capable of supporting entrepreneurship, innovation, and various development projects. Key reforms and developments in this area included the creation or reorganization of public development banks, industrial funds, and other financial institutions.

The Polish Development Bank (BGK – Bank Gospodarstwa Krajowego), established in 1924, underwent significant strengthening and expansion of its role. The BGK became instrumental in managing and disbursing EU funds, providing loans for infrastructure projects, and supporting small and medium-sized enterprises (SMEs). A crucial aspect of this support involved expanding credit guarantee schemes that reduced the risk for banks and encouraged them to lend to SMEs. Alongside the reformed BGK, the Polish Agency for Enterprise Development (Polska Agencja Rozwoju Przedsiębiorczości – PARP) was created to foster entrepreneurship, innovation, and R&D activities in domestic enterprises. PARP offered grants, subsidies, and training programs, primarily funded by EU structural funds. The most recent and, at the same time, closest to the market developmental institution established in Poland was the Polish Development Fund (Polski Fundusz Rozwoju – PFR). PFR embraced a modern approach to economic development, providing a wide range of financial and advisory services to businesses, local governments, and individuals. Its primary objective was to support the sustainable development of the Polish economy, foster innovation, enhance competitiveness, and promote investments in various sectors.

While each of these institutions held specialized focus areas, their activities complemented each other. For instance, the PFR's broad economic development initiatives could align with the BGK's infrastructure financing and the PARP's support for SMEs. Collaborations between these entities were frequent, including the PFR and BGK co-financing infrastructure projects and jointly implementing government economic support programs.

Key areas of responsibilities of BGK, PFR and PARP

1 Support for Businesses:

- The BGK is Poland's national development bank, which is primarily engaged in financing infrastructure projects, supporting regional development, and facilitating access to finance for businesses, particularly small and medium-sized enterprises (SMEs).
- The PFR and the BGK provide financial support to businesses, especially SMEs and startups, through various instruments such as loans, guarantees, and equity investments.
- The PARP and the PFR focus on promoting entrepreneurship, innovation, and R&D activities, often collaborating with other financial institutions and VC funds

2 Energy and Utilities:

- The PFR invests in strategic sectors of the Polish economy, including infrastructure, energy, and technology. It also supports industries crucial for economic transformation and growth, such as green energy and digitalization.
- The PARP focuses on supporting entrepreneurship, innovation, and the growth of SMEs. It provides grants, training, and advisory services to enhance the competitiveness of Polish enterprises.
- By providing funding and support, all institutions act as catalysts for private investment and public–private partnerships, essential for large-scale and high-impact projects.

3 Economic Stabilization and Crisis Management:

- In response to economic challenges, such as those posed by the COVID-19 pandemic, the PFR (assisted by the PARP) played a crucial role in implementing government programs aimed at stabilizing the economy and supporting businesses and employees affected by the crisis.

4 Local and Regional Development:

- The BGK and PFR assist in financing projects that are important for local and regional development, working in conjunction with local governments and regional development agencies.

5 International Expansion:

- The PARP supports Polish companies in their efforts to expand internationally, promoting Polish exports and international cooperation.

6 Social and Housing Programs:

- Apart from economic projects, the PFR is involved in social programs, including those related to housing, healthcare, and social welfare.

Source: Own elaborations based on PFR/BGK/PARP data

2.4. Economic results of the industrial transformation of Poland 1990–2022

The economic transformation of Poland from 1990 to 2022 brought about remarkable changes in its industrial landscape. In the early 1990s, like many CEE countries, Poland experienced economic hardship due to the collapse of COMECON, market liberalization, and foreign competition, which exposed the outdated and poorly organized post-socialist industrial base. Traditional heavy industries, such as steel, coal mining, and shipbuilding – the mainstays of communist central planning – suffered the most due to declining demand, overcapacity, and their inability to compete with foreign rivals. These industries underwent significant downsizing, leading to high unemployment in regions dependent on them.

The service sector (including banking) and light manufacturing sector, which produced consumer goods, recovered quickly. However, even in these sectors, significant restructuring was required to address issues such as undercapitalization, technological backwardness, overemployment, and a lack of developed marketing and sales channels. Despite these challenges, these industries were better positioned than mining and steel to adapt to market conditions, and they benefited from the surge in consumer spending and FDIs in the early 1990s.

Thanks to these industries, Poland was the first country in the region to recover from the initial transition shock and establish the foundations for strong economic growth in the future. Over the next three decades, it became the only European country to avoid a recession, even during the global financial crisis of 2008–2009 and the eurozone crisis of 2012. The pace of change was particularly evident in manufacturing, which saw its output increase sevenfold. This was attributed to the transparent privatization process of most state-owned enterprises and the substantial investments in new production capacities made by the private sector.

A clear trend towards higher technological complexity in manufacturing emerged from the very beginning of the transformation, as Poland shifted from producing simple, labor-intensive goods to more complex, technology-driven products. The influx of FDI, particularly from EU countries, played a crucial role in this transition, bringing in capital, technology, and expertise. Investors were drawn to Poland's relative advantages, such as the structural reforms implemented in the late 1980s and 1990s, coupled with fundamental factors like a skilled, yet low-cost, workforce and its proximity to Germany, the European manufacturing giant.

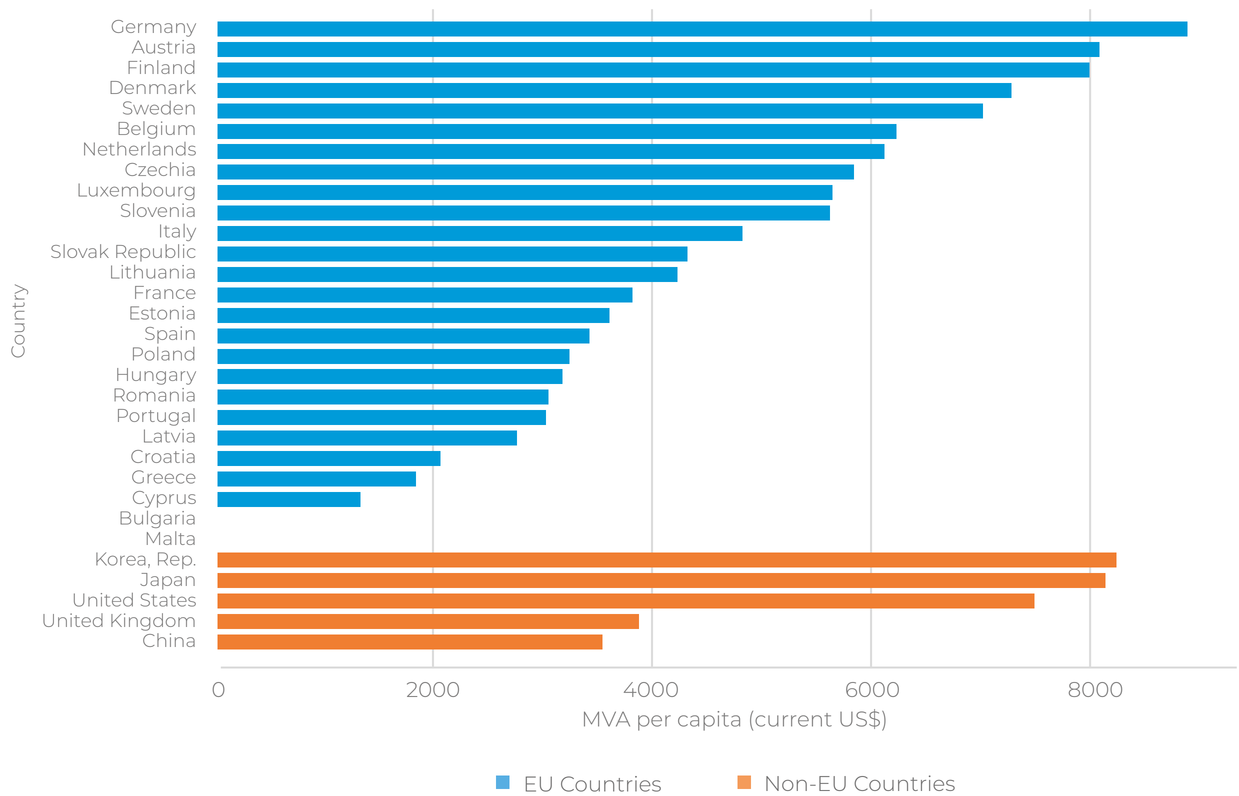
Government policies aimed at supporting FDI, including investment incentives, tax breaks, and programs to promote exports, also provided significant assistance. Additionally, the growing entrepreneurial spirit among Poles, coupled with the opening of opportunities for cooperation with international giants and access to finance from the modernized banking system, fueled the growth of domestic manufacturing as individuals recognized the opportunities presented by the changing economic landscape and established their own businesses.

As a result of these factors, domestic manufacturing in Poland experienced significant growth in the 1990s, and actively participated in the sector's rapid modernization and diversification. Poland quickly moved beyond traditional industries such as steel, coal, and textiles, diversifying into other branches that were relatively underdeveloped under socialist rule. These included furniture, chemicals, automotive components, electrical equipment, pharmaceuticals, and machinery

After joining the EU, Polish manufacturers began exporting their products to various markets worldwide, transforming the country from a relatively closed economy in 1990 to a highly open and export-oriented one. While the EU remains Poland's largest trading partner, Polish companies have expanded their reach to global markets, including North America and Asia. The range of exported products broadened significantly, encompassing everything from machinery, automotive parts, and electronics to agricultural products and processed foods.

In conclusion, between 1990 and 2022, Poland's industrial sector underwent not only significant quantitative expansion in terms of production and exports, but also qualitative transformations, moving towards more technologically advanced and diversified industries. This transition has been a cornerstone of Poland's economic success story in the post-communist era. The ongoing challenge for Poland is to continue increasing the volume of industrial production (which, in per capita terms, is comparable to France or the United Kingdom, but still grows 5–7 percent per year) while simultaneously moving up the value chain. Boosting domestic innovation and R&D capabilities remains a top priority for sustaining long-term growth in industrial complexity. While Poland still lags behind some Western European countries in terms of innovation and R&D, progress has been made, with a growing focus on developing higher-value-added industries. Recently, adapting to environmental standards and the shift towards green technologies has emerged as a key area of focus for Polish manufacturing.

Manufacturing Value Added per capita in EU and selected non-EU countries (2021/2022, current US$)



3. Why was Ukraine's manufacturing not as successful as that of Poland?

The transition from a planned economy to a market economy has **been even more challenging for Ukraine than for Poland and other CEE states.** Several factors have contributed to its much slower economic growth and underdeveloped manufacturing sector, compared to post-communist countries. These include Poland, Czechia, Hungary, the Baltic States, and Russia and Belarus – which performed significantly worse than CEE with respect to manufacturing growth after 1990, but still better than Ukraine, which barely retained the level it reached during its industrial production in 1990. While Poland managed to successfully restructure and modernize its industry over the first 10 years of its transformation, progress in this area has been much slower in Ukraine. Part of the problem was that, in the 1990s, the country faced significantly larger economic challenges than its western neighbor, including stronger reliance on industries such as basic commodities like steel and agriculture, which are vulnerable to price fluctuations in global markets. The scope of the economic shock caused by the collapse of the Soviet Union was also much larger in Ukraine than in Poland, where, after World War II, large level of economic and political autonomy were retained that enabled the formation of elites necessary for swift implementation of economic reforms, which quickly reignited the economy after 1989.

While Poland managed to successfully restructure and modernize its industry over the first 10 years of its transformation.

On the macroeconomic side, the contraction of consumer and investment demand was largest in those socialist countries that, before 1991, formed the USSR and, among them, in those that cultivated communism, not for forty-five, but rather for seventy years. When other parts of the Soviet economy were severed, many state-owned enterprises in Ukraine, Russia, and Belarus, struggled to adapt to market conditions and became bankrupt. This happened because the task of restructuring legacy industries inherited from the communist period required significant efforts and strategic decision making that was much easier to undertake in countries that retained independent statehood after 1945. The conflict with Russia, including the annexation of Crimea in 2014 and the ongoing conflict in Eastern Ukraine, had significant negative impacts on the Ukrainian economy, even before the outbreak of the full-scale conflict in 2022. This led to the loss of control over productive regions, the displacement of people, the destruction of infrastructure, and a decline in trade.

It is important to note that the **process of restructuring legacy industries** was also difficult in those CEE countries that – like Poland – managed to successfully transition to the market economy. Reforms led to significant social and economic dislocation, including rising inequality and unemployment, which required relevant social assistance to be prepared in a way that would minimize its negative impact on the economy. Not all legacy industries could have been successfully restructured. In some cases, companies were simply not viable in a market economy and had to be liquidated. This was a painful process, often involving job losses and economic hardship, but it was sometimes necessary to free up resources for more productive uses. A good example of successful restructuring is provided by Poland's steel industry. In a similar way to Ukraine, when inherited from the communist era, the Polish steel sector was marked by outdated infrastructure, inefficient production methods, and substantial, negative environmental impact. With the transition to a market economy in the 1990s it faced new competitive pressures, both domestically and internationally, which required a combination of closures, layoffs, investments in new technology, and the consolidation of existing facilities. Such a process needed efficient governance, which in the 1990s, existed in Poland, but was lacking in Ukraine. In order to inject necessary know-how and capital into the sector, Polish governments decided to privatize its largest enterprises to international giants, which – in the case of the steel sector – meant global giant ArcelorMittal. This investment led to significant modernization and productivity improvements, additionally supported by the introduction of a range of new environmental regulations, covering areas such as air quality, water quality, waste management, and nature protection, which had to be accepted by Arcelor Mittal and other investors in legacy industries. Similar to Poland, the privatization of Ukraine's steel sector began in the mid-1990s and continued into the early 2000s. However, the process was marred by a lack of transparency, weak regulatory oversight, and pervasive corruption. Major state-owned enterprises in the steel sector were sold off at below-market prices to insiders and politically connected individuals. As a result, a small number of powerful business tycoons, known as oligarchs, took control and the lack of competition led to issues of mismanagement, underinvestment, and low productivity in the later years. This started to change in 2005 when ArcelorMittal purchased the Kryvorizhstal steel plant, one of the largest in Ukraine. The initial privatization of Kryvorizhstal in 2004 was controversial, as it was sold to a group of Ukrainian oligarchs for a sum well below its estimated market value. Following a change in government, the sale was annulled, and the plant was reprivatizedin a more competitive and transparent auction, which was won by ArcelorMittal.

Major state-owned enterprises in the steel sector were sold off at below-market prices to insiders and politically connected individuals.

In general, Ukraine's privatization (not only of the steel sector but overall) was – compared to that of Poland–a rather **slow and non-transparent process** that faced numerous challenges. Despite adopting a mass privatization program in the mid-1990s, many large state-owned enterprises remained under state control or were acquired by oligarchic groups, which gained not only significant control over them, but also substantial political power that crippled future reform attempts aimed at increasing the economy's internal and external competitiveness. In this respect, Ukraine was similar to Russia, not to Poland, but pursued a strategy of mass privatization through which citizens were given vouchers to purchase shares in state enterprises. However, the process was marred by corruption and led to the concentration of wealth in the hands of a few oligarchs, who came to control significant portions of the economy and, through the close ties on Russian politics, mitigated future liberalizing reforms. Poland avoided the danger of oligarchization by a more gradual process of privatization and the large involvement of the international companies within it. This process was not without controversy, but it resulted in a decisive shift towards private ownership in most sectors. Moreover, Poland was the first country in the region to adopt a comprehensive program of structural reforms that secured property rights and incentivized green field investments.

Unlike Ukraine, **the Polish model of privatization was varied**, including methods such as liquidation, employee ownership, leasing, and the sale of state enterprises to foreign and domestic buyers. It is, generally, considered as the most successful privatization model in the region as Poland managed to avoid the drawbacks of the "voucher privatization" applied in Russia and (to a smaller extent) in Czechia, while simultaneously not limiting itself to attracting FDIs. The Polish model involved privatization in a mixed way by selling some of the shares to the strategic investors from Western countries and some of the shares to private individuals through the domestic capital market. This allowed the building of private capital in a competitive way, especially as the large-scale privatization via the Warsaw Stock Exchange was supplemented by selling assets to private entrepreneurs through a transparent and competitive process (liquidation privatization). This strategy resulted in smaller, although still substantial, foreign ownership of the Polish industry, compared with Czechia, Slovakia, or Hungary at the time, while not endangering the overall pace of industrial development due to the inflow of capital and industrial know-how that was even stronger than in other CEE states.

Apart from privatization, since the early 1990s, former communist countries – among them, Poland – have worked to **improve their business climate.** To achieve this, they implemented a series of regulatory reforms that aimed to simplify business registration, reduce the number of activities subject to licensing, improve insolvency procedures, modernize tax system and administration, strengthen corporate governance, and enhance the ease of doing business. Before entering the EU, the liberalization of business regulations required the establishment of institutions designed to support a market economy. This included independent regulatory bodies in sectors such as energy, finance, railway, and telecommunications, as well as an independent judiciary to enforce contracts and settle disputes. This process was crucial for creating a stable, predictable business environment. For Poland and other CEE countries that joined the EU in 2004, realistic perspective of integration was a key driver of these institutional reforms in the late 1990s. This is because EU membership comes with requirements for regulatory alignment, which usually involves a significant institutional shift due to the adoption of 'Acquis Communautaire'. Implementing laws across a wide range of areas, including human rights, environmental standards, and competition law, was very beneficial for the Polish economy as it meant building business-friendly institutions. In particular, to ensure independence, efficiency, transparency, and accountability, substantial reforms of public administration and the judiciary were undertaken, giving potential investors confidence to invest in Poland and other CEE countries as soon as the late 1990s, i.e., a few years before the real accession to the EU (for more on the institutional reform, see Krzysztof Głowacki's chapter Changing the Rules of the Game in this volume).

Significant reforms have been undertaken in public administration and the judiciary.

Although Ukraine has been reforming its institutions since the mid-1990s, the progress has been slow, uneven, and much less consequential than it was in Poland. Early attempts at market reforms were hindered by political instability, corruption, and the influence of the business interests of the most powerful oligarchs. This lack of comprehensive and consistent reform agenda limited Ukraine's economic outcomes, resulting in a deep and long-lasting recession in the 1990s and weak growth afterwards. Firm creation and destruction remained low and the number of business successes, i.e., private firms that managed to grow remained limited despite the high level of capital concentration in the country. At the same time, **Poland witnessed a snowball effect of firm development.** Millions of entrepreneurs tried their luck in the vibrant, although somewhat chaotic, economy of the 1990s and thousands managed to transform their businesses to large and, in some cases, global successes. Over the thirty years, this translated itself into a large development gap between Ukraine and its western neighbor. While Poland more than tripled its GPD per capita, Ukraine's barely grew. However, more recently, since the 2013 Revolution and once Ukraine had started to follow Central Europe with respect to structural reform efforts, this started to change. The prospect of integration with the EU opened in 2014 when the association agreement was signed; this has been a major driver of these efforts as Ukraine committed itself to align its institutions and standards with the EU. These include anticorruption measures, judicial reforms, the decentralization of government power, and reforms to the energy and education sectors. Before the outbreak of the war with Russia in 2022, the process of the adaptation of the EU 'Acquis Communautaire' has been partially advanced, although much more needs to be done before the country achieves the level comparable to CEE states, including Poland, Czechia, and Hungary, when they entered the EU in 2004.

Intensive business development has occurred in Poland.

The specific set of policies that helped Poland to meet European standards in the industry concerned **investment financing and environment.** Poland was already an early mover in this respect, in the early 1990s, when it established demanding environmental standards and started to allocate money through the National Fund for Environmental Protection and Water Management for modernization purposes. Earlier than in other CEE states, the fund provided substantial financial support in the form of targeted loans, guarantees, and subsidies for various environmental projects in the economy. Over the years, it helped to finance many initiatives, such as the development of sewage treatment plants, water supply systems, air pollution control measures, and waste management facilities, among others. Its role continued after the accession to the EU, when it started to implement projects financed by the EU. Other types of industrial investments benefited from similar financing and assistance provided by development agencies such as PARP, BGK, and PFR, with each institution playing a distinct, yet complementary, role in supporting Poland's economic development, innovation, and industrial competitiveness. The lack of such institutions could play a role in poorer economic growth in Ukraine compared to Poland after 1990.

Another comparative advantage that favored rapid industrialization in Poland, stronger not only than in Ukraine, but also than in most other CEE states, was its **well-educated population.** Although, in the early 1990s, the difference between the country and the rest of Central Europe was not very large, the incentives created by the market-oriented economy and early educational reforms changed the picture drastically within the decade. In particular, the ability to speak English and German became widespread among Poles, placing the country at the top of the EU. The same can be said about skills in mathematics, science, or programming, as measured by international education rankings such as PISA. A highly educated workforce, with many people with university degrees equipped with technical and managerial skills, made the country very attractive for industries that required skilled labor. This advantage of human capital favored advanced services and manufacturing. At the same time, more general training was key to equipping industrial workers with competences demanded by the industry. Targeted active labor market policies, combined with the dispersed efforts of individual workers, quickly filled the gap, including in legacy industries for which the requirement to retrain or upskill the workforce was especially large.

Apart from the institutional gap, another important factor that hindered Ukrainian growth was **less favorable geography.** Ukraine is more distantly located to Western Europe then other CEE states. Therefore, from the perspective of foreign investors, it was – ceteris paribus – less attractive as a potential place for investment. In the case of Poland, the strong inflow of FDIs had started at the end of the 1990s when international capital widely accepted that market-oriented reforms would not be stopped. Following the rules of economic geography, new production facilities concentrated on the western part of the country that bordered with Germany. This induced within-country migrations from the underdeveloped east to the more developed west. Foreign companies often brought needed capital, technology, and expertise, which later – through industrial commons – were shared with domestic firms, benefiting the entire economy through better connection to global supply chains. A similar role was played by the six largest Polish agglomerations: Warsaw, Wrocław, Kraków, Łódź, Silesia, and Three City. Although to attract FDIs, Poland established SEZs in many parts of the country, those located in its western Voivodeships or close to the Big Six mostly proved to be successful, whereas those in the east struggled to attract many investors.

The location of Poland and other CEE countries in the heart of Europe, close to the mature markets of the west, made them attractive for manufacturing and logistics as industries tend to cluster in specific regions as they benefit from being near each other. This led to the creation of "clusters" through which the concentration of interconnected businesses, suppliers, and associated institutions in a particular field spurred productivity, innovation, and fostered knowledge spillovers. In the case of Poland and other CEE countries, such districts typically emerged either in their western, capital, or coastal regions, only gradually percolating to other regions. In order to partially overcome this problem, Poland attempted to upgrade its outdated infrastructure and improve its interconnectivity with the most distant regions. This included transportation infrastructure, utilities, and telecommunications, but proved to be only relatively successful as capital still favored already-developed regions.

4. What type of economic policy did Poland implement?

The Polish experience with industrialization over the last thirty years provides strong evidence that **globalization has a transformative impact** on the way countries industrialize. During this period, technological advancements have fundamentally changed global manufacturing, leading to lower transportation and coordination costs, and enabling the formation of global value chains. This shift has had significant implications for the development strategies of catching-up economies. Those countries that, like Poland, quickly liberalized their economies and integrated with global trade networks, have managed to successfully increase their industrial production, and have experienced strong economic growth. Conversely, countries that, like Ukraine, have remained largely closed and isolated from international flows of capital, have stagnated, gradually losing ground to developed economies.

This suggests that traditional industrial policies, which focus on protecting and promoting domestic industries through tariffs, subsidies, and discriminatory regulations, are not effective in the current global context. Instead, policies that enhance country's ability to plug into global value chains, emphasizing the attraction of FDIs, human capital accumulation, the strengthening of the financial sector, infrastructure development, and productivity growth through large-scale imitation and imported know-how, seem to be the most successful developmental strategies for catching-up economies. Modern industrial policy must adapt to the realities of a highly interconnected global economy, in which production processes are fragmented and spread across multiple countries. Poland, along with other CEE states, exemplifies a country that has successfully harnessed these aspects of the economy to benefit its own citizens. To a significant extent, Poland's post-1990 economic development model can be characterized as **export-led growth.** The country's industrialization resulted from investments by multinational corporations that established facilities in Poland to produce for the global market. Domestic producers often partnered with these corporations, gaining valuable knowledge, and gradually integrating their own operations into the global economy. This proved highly beneficial for Poland, as foreign markets provided a rigorous test of the country's productive capabilities, driving efficiency and industrial innovation.

To a significant extent, Poland's post-1990 economic development model can be characterized as export-led growth.

Poland's path to industrialization underscores the importance of a **robust institutional framework for effective industrial policy.** This includes transparent and efficient government institutions, the rule of law, and mechanisms for resolving disputes and enforcing contracts. Polish industrial policy was largely horizontal in nature. Government actions provided broad, non-discriminatory support for industrial investment across various sectors or industries. These policies were designed to create an overall favorable business environment, restructure, and privatize most SOEs, attract as many FDIs as possible, and not to develop specifically selected industrial branches or enterprises. Notably, Poland, through its accession to the EU, aligned its policy globally, creating a predictable regulatory environment for a wide spectrum of potential investors. This EU orientation helped Poland to resist the temptation of protectionism, which would have likely been counterproductive in an era where economic success has become increasingly intertwined with international integration.

Poland's industrial policy in the 1990s and 2000s was characterized by a **horizontally focused, pragmatic approach** that emphasized building productive capabilities. This approach was coupled with close collaboration between the public sector, private enterprises, and labor unions. Subsequent governments engaged in ongoing dialogue with these stakeholders to identify barriers to growth and collectively address specific issues, including layoffs and environmental challenges. This process was, generally, open to experimentation and learning from failures, enabling the adaptation of policies to changing circumstances. While social dialogue sometimes delayed necessary restructuring in vulnerable and heavily unionized industries, such as coal mining and energy, resulting in lower productivity and more detrimental environmental impacts; regular dialogue between government agencies, employers, and employees proved effective in formulating horizontal industrial policies that aligned with the needs and realities of the Polish manufacturing sector, while also being acceptable to society.

In essence, Poland's industrial policy during this period was shaped by pragmatism, a focus on productive capabilities, and the **collaboration between the government and the private sector.** This approach was adaptable, accountable, and well suited to the realities of global value chains and the growing importance of the service sector and digital economy in the global economy. Poland's shift towards market liberalization and its efforts to enhance international competitiveness were driven by the ambition to integrate with Western economic and political structures such as NATO, OECD, and the EU. As a result, Polish industrial policy, while horizontal in nature, employed a mixed toolbox of measures encompassing investment in education and skills development, infrastructure modernization, targeted FDI attraction through subsidies and tax incentives, and support for environmental protection and R&D.

5. An Industrial policy for Ukraine

A successful industrial policy for Ukraine may involve a set of strategic, proactive measures that will – to a large extent – follow the Polish example, while adjusting to the new circumstances that arise from the changing global order. Such a policy may include:

1 **Strategic Planning:** There must be a clear vision of the industry's development path, with objectives and timelines clearly defined. It should align with the overall economic development strategy of the country and prioritize the overall growth of industrial production rather than a specific sector or branches.

2 **Regulation and Oversight:** Ukraine must implement and enforce transparent regulations to ensure that industries operate in a manner that is safe, sustainable, and fair. This should involve judiciary, business registration, labor laws, environmental standards as well as regulations related to product safety and quality. The quick adoption of the EU acquis Communautaire is very important in this respect.

3 **Incentives and Subsidies:** Ukraine may provide financial incentives, such as tax deductions, subsidies, or low-interest loans, to stimulate industrial investment. These incentives should consider regional economic conditions but must not ignore the demands of economic geography that will favor certain areas (Western Ukraine over Eastern, coastal areas and Dnieper basin over inland areas, etc.). FDIs should be prioritized – especially in the early phase of industrialization – to inject necessary capital and know-how into the Ukrainian economy.

4 **Investment in Infrastructure:** Reliable, efficient infrastructure (e.g., roads, ports, telecommunications, and utilities) is critical for industrial growth. Ukraine should prioritize the development of interconnectivity with the EU and, in particular, with Poland in the same way that Pol and prioritized interconnectivity with Germany. The development of maritime infrastructure (ports) should also be beneficial for industrial development.

5 **Human Capital Development:** Education, training, and workforce development programs are key to supplying industries with the skilled workers they need. This might involve partnering with Poland on proven educational reform, which delivered good results in transforming Poland into one of the top OECD countries with respect to educational outcomes.

6 **Assuring Access to Finance:** Ukraine can foster industrial competitiveness by strengthening access to the financing of domestic enterprises. This may require the establishment of a suitable set-up of institutions responsible for the support of industrial restructuring (like the Polish ARP), machine park modernization (like the Polish PARP), as well as innovation and expansion-oriented projects (like the Polish PFR).

7 **Inclusive and Sustainable Development:** An effective industrial policy also includes measures to ensure that the benefits of industrial development are widely shared, and that the industry operates in a sustainable manner. This might involve programs to create jobs, support for SMEs, or regulations to reduce environmental impact. Polish institutions such as the BGK or the NFOŚiGW may serve as an example of well-designed developmental institutions that can efficiently support these types of projects.

Implementing a successful industrial policy requires coordination among various stakeholders, including government agencies, industry, academia, and civil society. Regular monitoring and evaluation are also crucial to assess the effectiveness of the policy and make necessary adjustments. Moreover, the policy must be flexible enough to adapt to changing circumstances and market conditions. This includes being responsive to technological advancements, shifts in global markets, and changes within the EU. Therefore, the coordination of industrial policy should be located in one public entity (e.g., the Ministry of Economy) that will however have to coordinate its efforts with other bodies such as the Ministry of Finance, the Ministry of Regional Development, and the Ministry of European Integration.

A particular challenge for Ukraine might arise from the need to balance its industrialization with decarbonization. Here are several strategies that Ukraine can implement to achieve this goal:

1 **A Shift Towards Renewable Energy:** Ukraine, like many countries, can decarbonize its industrial sector by transitioning from the use of fossil fuels to renewable energy sources such as wind, solar, hydropower, and bioenergy. Excellent natural conditions and the country's large area compared to its population should make this transition easier than for Poland. Investments in RES should be encouraged from the very beginning of the Ukrainian transformation.

2 **Establish Robust Policies and Regulations**: Ukraine must adopt EU environmental standards as these regulations play a key role in supporting decarbonization efforts. These include renewable portfolio standards, carbon pricing mechanisms, emissions standards for vehicles and industrial processes, and incentives for green technologies. At the same time, retaining the ability to be responsive to technological advancements, shifts in global markets, and socioeconomic changes are also crucial.

3 **Improve Infrastructure:** Developing and upgrading infrastructure to make it more adaptable for decentralized energy systems can reduce reliance on fossil fuel-based power plants and can be more resilient and more energy-efficient on the macro level. This includes everything from industrial facilities and public transportation to residential buildings. The allocation of structural funds for these purposes should be high on Ukrainian government's priority list when the membership is negotiated.

4 **Implement Energy Efficiency Measures:** Energy-efficient technologies reduce the amount of energy required to produce goods and services. Ukraine should invest in energy-efficient technologies in industries, residential buildings, commercial establishments, and transportation to decrease its overall energy consumption and reliance on Russia. The reconstruction of Ukraine after the war should, therefore, prioritize the energy efficiency of recreated buildings and infrastructure.

5 **Educate and Raise Awareness:** Raising awareness about the benefits of decarbonization and training the workforce in the skills required for a green economy can drive sustainable development. As Ukraine shifts towards a green economy, it could create jobs in sectors such as RES, energy efficiency, and sustainable agriculture, which could help offset job losses in traditional industries lost to war or decarbonization.

6 **Develop Green Finance:** Green finance instruments, such as green bonds, can be used to raise funds for investments in sustainable projects. Collaborating with other countries and international organizations could help Ukraine learn from successful decarbonization efforts elsewhere – including the EU – and access funding for its initiatives from many donors.

6. Conclusions

The ongoing conflict in Eastern Ukraine, which was exacerbated in 2022 following a series of events that began in 2014, has significantly strained the Ukrainian economy. This conflict has led to the loss of control over productive regions, the displacement of individuals, infrastructural damage, and a decline in trade.

Notably, the restructuring of legacy industries presented considerable challenges, even to countries such as Poland, which successfully transitioned to a market economy. These reforms triggered significant socio-economic upheavals, including escalating inequality and unemployment. These issues required the deployment of robust social assistance measures designed to minimize the negative economic impact. The restructuring could not salvage all legacy industries, as some companies were simply not viable in a market economy and had to be liquidated. Although this process often resulted in job losses and economic hardship, it was sometimes necessary to reallocate resources for more productive uses. The restructuring of Poland's steel industry serves as a successful example. It was inherited from the communist era, marked by obsolete infrastructure, inefficient production methods, and substantial negative environmental impacts. With the transition to a market economy, the sector faced new competitive pressures that necessitated a demanding restructuring process. This included closures, layoffs, investments in new technology, and the consolidation of existing firms.

However, Ukraine's privatization process was slow, and it faced numerous challenges. Despite the adoption of a mass privatization program in the mid-1990s, many large state-owned enterprises in strategic sectors remained under state control. The process was also characterized by a lack of transparency, with a number of enterprises being acquired by oligarchic groups that gained significant control over the strategic industrial sector. Consequently, this crippled future reform attempts aimed at increasing the economy's internal and external competitiveness. Apart from privatization, former communist countries have worked to improve their business climate since the early 1990s. To achieve this, many countries implemented a series of regulatory reforms aimed at simplifying business registration, reducing the number of activities subject to licensing, improving insolvency procedures, modernizing tax systems, strengthening corporate governance, and enhancing the ease of doing business. Furthermore, membership in the EU was a decisive factor for the industrial development of CEE countries, including Poland, not only because of the institutional reforms, but also due to its geography and market access.

How can Ukraine successfully industrialize and decarbonize simultaneously? Balancing industrialization with decarbonization is a complex task that requires strategic planning, robust investment, and close monitoring. To follow the footsteps of Poland and other CEE countries and build a modern manufacturing sector, Ukraine needs a comprehensive, strategic, and proactive industrial policy. This policy should align with the country's overall economic development strategy and must include incentives for industries, investments in infrastructure and human capital, robust regulations and oversight, the promotion of FDIs, favorable international trade policies, public–private partnerships, inclusive and sustainable development, and flexibility and adaptability.

References

Główny Urząd Statystyczny. (2011). Pracujący w gospodarce narodowej w 2010 r. https://stat.gov.pl/obszary-tematyczne/rynek-pracy/pracujacy-zatrudnieni-wynagrodzenia-koszty-pracy/pracujacy-w-gospodarce-narodowej-w-2010-r-,7,7.html

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ALIGNING CLIMATE & ENERGY POLICIES

Polish lessons from EU accession

Krzysztof Kobyłka, Marianna Sobkiewicz

Summary

- The centrally planned economies of the shared Polish and Ukrainian past tended to favor monopolies and oligopolies in the energy sector, leading to emergence of strong pressure groups, such as mining trade unions in Poland. In such cases, social awareness, political will, and a strategic vision are indispensable – and all these Poland has lacked.

- After the war, Ukraine is likely to face similar challenges as Poland faced in the 1990s and onward: an ageing array of power plants, transmission, and distribution infrastructure in need of modernization, and an increased demand for electricity.

- Instrumental to Ukraine's EU integration will be the establishment of a truly competitive energy market, which will make the prices of electricity, other energy carriers, and their derivatives more realistic, allowing for more informed consumption and unlocking investments in the sector. Like Poland's, Ukraine's electricity sector is highly consolidated, and reforms are required to improve transparency.

- Compared to Poland in the past, Ukraine in the future will be tasked with the implementation of a decidedly broader acquis. Almost two decades after Poland's accession, the EU is at a much more advanced stage of legislative and institutional development. The previous, relatively modest, volume and depth of energy-related legislation has been expanded substantially, with new legislative acts designed to create and integrate not only energy markets per se, but also the strategic visions of the Member States with regard to their energy transition toward sustainability.

- Ukraine faces the challenge of fully dismantling its oligarchic system, which has historically impeded competition and transparency in many markets, including in the energy markets. Relatedly, the problem of corruption has the potential to undermine the development of institutions that are tasked with the broadly understood energy transition.

- Ukraine will have to navigate between the energy trilemma: social equity, environmental protection, and energy security, which will, undoubtedly, pose a challenge. Poland's example indicates that the greatest difficulty may lie in the broader implementation of energy and climate policies, i.e., in accommodating EU values, rather than in the transposition alone.

- Poland failed to recognize the long term consequences of neglecting decarbonization in the energy sector, which only exacerbated its problems: the dwindling profitability of coal mining, the aging conventional power plants and other infrastructure, and inefficient coal-heated buildings. To counter this, a clear transition, monitoring, and governance strategy must be established. Admittedly, the example of Poland shows how difficult it can be to create a cross-political consensus on the overall direction for the sector.

- It can hardly be denied that Ukraine faces a myriad of political, institutional, and social challenges; however, just as Poland, it is also at the verge of a historic opportunity to build a sustainable and resilient economy. Its common and competitive energy market, extra funds for its reconstruction and transformation, and the EU's strategic vision will mark the way.

1. Introduction

Following the collapse of the Soviet Bloc at the turn of the 1980s and 1990s, Poland and Ukraine both faced the challenge of transition from centrally planned economies to market-based systems. Among other things, the challenge involved the liberalization of national energy markets and the transformation of national energy sectors in line with European trends. In tackling that historical challenge, Poland and Ukraine took largely divergent paths. In the context of Ukraine's current EU accession path, Poland's experience may offer valuable lessons, both on the positive side (particularly with regard to liberalization) and on the negative side (particularly with regard to decarbonization efforts). Both types of experience may be relevant as Ukraine is breaking out of the oligarchic socio economic system, which has long kept it locked within the so called partial reform equilibrium (Hellman, 1998).

Admittedly, the European Union has changed considerably since Poland became a Member State in 2004. At the beginning of the 21st century, the EU's energy strategy revolved mainly around creating and maintaining well-functioning energy markets, while climate policy was still a novelty. However, almost two decades later, Ukraine faces the challenge of aligning its national law with an extensive energy and climate acquis, which now includes the EU's ambitious targets across three fundamental pillars: the reduction of greenhouse gas (GHG) emissions, the development of renewable energy sources (RES), and the improvement of energy efficiency.

Several shared characteristics make Poland's experience relevant to Ukraine, especially in the area of decarbonization. In their former lives as socialist economies, both countries relied on heavy industry, and that dependency largely carried through beyond their transition to market-oriented systems. In particular, coal mining and energy generation from coal have been essential to both countries, although coal has been far more dominant in Poland's energy mix.

Both before and after the accession to the EU, changes in Poland's energy sector resulted from several interdependent factors. The following may be distinguished as key:

- Historical conditions,
- Endowment with natural resources,
- Economic & market conditions,
- Technological advancement,
- Domestic and EU policies.

To understand the changes that have taken place in the Polish energy sector over the past two decades, it is important to appreciate the above factors in their political and social contexts. This is what we endeavor to do in this chapter, which offers an analysis of Poland's EU integration efforts, the accession itself, and post-accession developments within the country's energy sector. In the process, we review the overall direction of the changes, their effectiveness, and, most importantly, their relevance to Ukraine's present needs.

2. Poland's experience

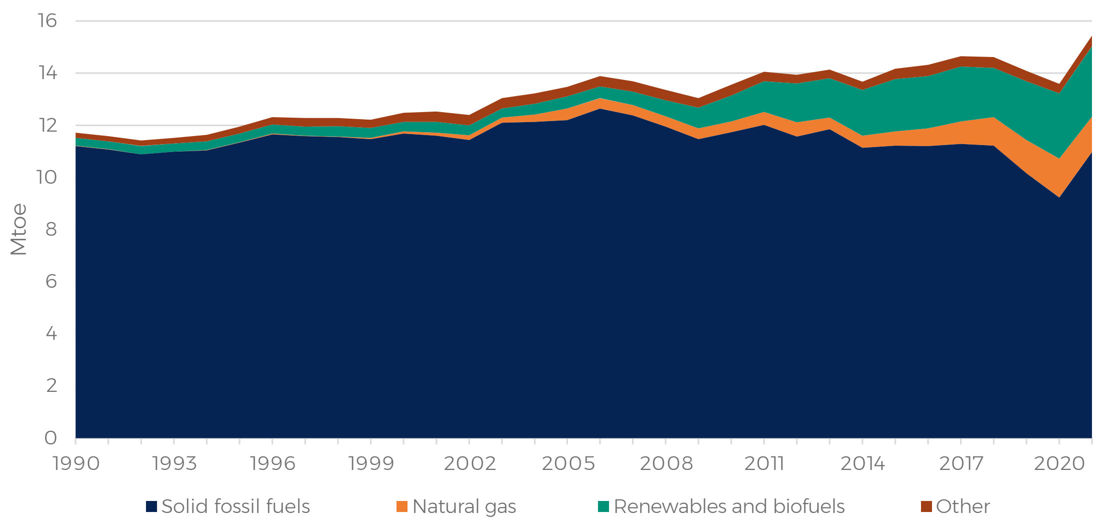
2.1. Climate and energy developments in Poland

We begin with an outline of the actual evolution of climate and energy in Poland prior to, and following, its accession to the EU. This will elucidate the challenges posed by the EU policy today, including the development of an energy market, the phasing out of fossil fuels, the development of RES, the improvement of energy efficiency, and the reduction of GHG emissions.

As mentioned above, owing to large domestic reserves, coal has played a crucial role in Polish modern history as the main energy carrier used in its economy and by its society. Indispensable in the sectors of power generation and heavy industry (metallurgy, chemistry, cement, etc.) and in the heating of households, it put mining and the associated industries at the center of the Polish Communist economy. During the 1970s and 1980s, the subsidization and allocation of coal by the central authorities of the Communist regime meant that the energy efficiency of the economy was low. This began to change after the fall of the Communist rule in Poland, when attempts to reform the sector began. As a result, hard coal production declined significantly in the 1990s, dropping by 42% between 1989 and 2000 (Główny Urząd Statystyczny, 2014). Despite this reduction, at the time of the EU accession, the Polish energy system was still characterized by a strong reliance on solid fossil fuels (especially hard coal), which constituted 59% of gross inland consumption and as much as 88% of primary electricity production.[1]

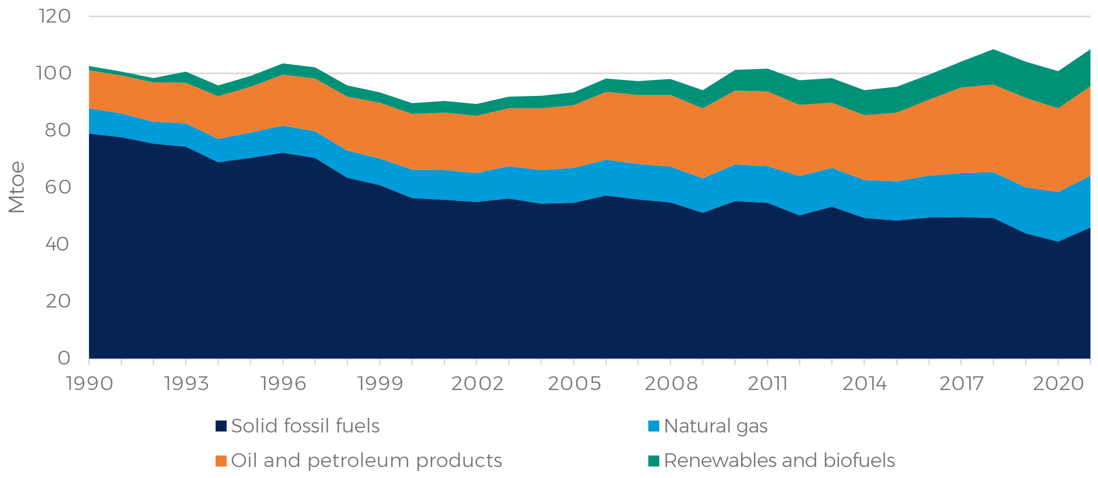
After almost 20 years of Poland's EU membership, there has been no substantial change, although the energy transition has progressed; energy efficiency has improved (including on the demand side), and the share of natural gas, biomass, and RES in the energy mix has increased. In particular, there has been a sharp rise in solar photovoltaics (PV) prosumer installations since 2015. Despite these developments, solid fossil fuels remain the dominant source of electricity, accounting for 42% of gross inland consumption and 70% of primary electricity production (see Figures 1 and 2).[2]

Figure 1: **Gross electricity production in Poland, 1990–2021**
Source: Eurostat



1 Eurostat, data for 2004.
2 Eurostat, data for 2001.

Figure 2: **Gross inland energy consumption in Poland, 1990–2021**
Source: Eurostat

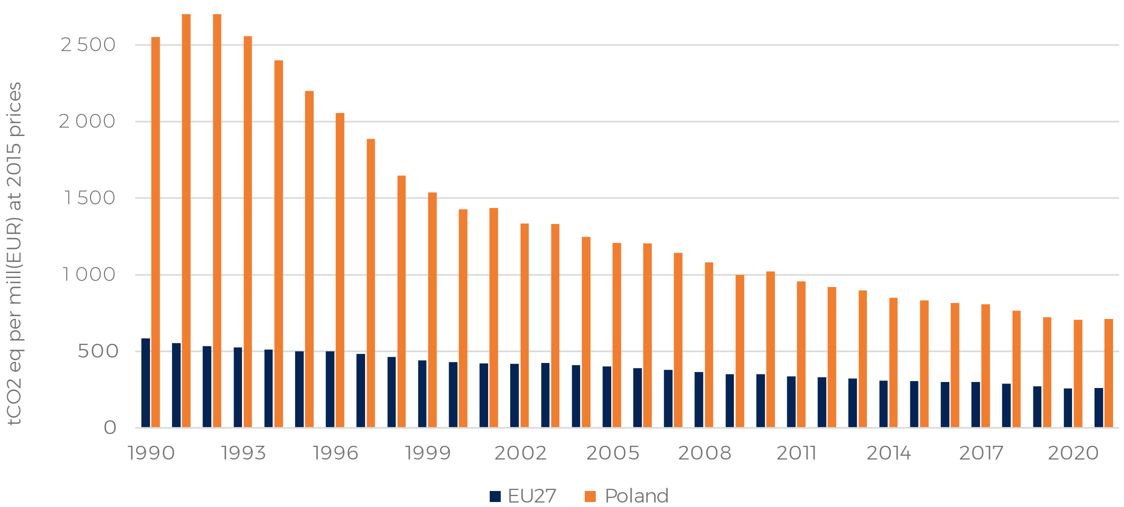


At the same time, Poland's GHG emissions increased by 5% between 2005 and 2019. This increase was mainly due to a rise in emissions from domestic transport, which went up by almost 80% during the same period (Kobyłka et al., 2022). The increase in passenger and freight transport volumes is characteristic of developing economies, and, in Poland's case, it was strengthened by the vigorous development of its international road transport sector.

Some visible emission reductions have been made in the energy sector (especially in power generation) and in the buildings sector (mainly through renovation). However, the potential for decarbonization in these sectors remains considerable, as their carbon intensity is still high. Moreover, while the country has managed to significantly reduce industrial emissions, it has failed to adequately regulate household emissions, hampering reductions in the residential sector (cf. Professor Karaczun's *Chapter Protection of Environment*).

Overall, Poland’s total GHG emissions have decreased substantially over the past three decades, largely owing to the high reduction potential of Poland as a high carbon intensity economy. However, Poland's emissions per unit of GDP remain well above the EU average (see Figure 3).

Figure 3 **Emissions per unit of GDP in Poland and EU, 1990–2021**
Source: European Environment Agency



2.2. Climate and energy policy before and after accession

In the 1990s, when the issue of climate change was beginning to make inlets into the global agenda, Poland was in the middle of a transition to a market based democracy, and its society was largely preoccupied with sweeping economic and political reforms. In 1994, only three years after the appointment of a fully democratic government, Poland applied for EU membership, commencing the process of EU integration. During the negotiation phase, the issue of climate change was still far from prominent on the EU agenda, and the relevant EU regulation was not yet advanced.

At that time, the most important objective for Poland's energy sector was to liberalize its energy market. An energy market, unlike its centrally planned alternative, is characterized crucially by the functioning of a decentralized pricing mechanism and the existence of competition. The pricing mechanism serves to convey information among stakeholders (buyers, sellers, investors, regulators) on the relative desirability of the respective energy goods and services. Competition serves to strengthen the offer of the products and services, including their availability, pricing, and quality. By providing reliable metrics of the current characteristics of the products, and by stimulating their development, the pricing mechanism and competition are not only instrumental to buying and selling of energy but are also quite indispensable once the challenge of transforming the sector is posed

In the 1990s, the primary goal for the Polish energy sector was the liberalization of the energy market

To navigate the development of its incipient energy market and to aid its integration with the EU, Poland adopted several strategic documents along the way – the *Energy Law*[3] from 1997 being the first and foremost. It outlined the initial legal and organizational structures for the functioning of the electricity market in Poland and defined the administrative bodies responsible for the energy sector. Notably, the latter included the *Energy Regulatory Office*,[4] charged with electricity licensing and energy tariffs. As a result, Poland managed to develop an energy market that is now largely comparable with those in other EU countries. *The Polish Power Exchange*[5] runs an Intra-Day Market, a Day-Ahead Market, a Futures Market, a Capacity Market, and a natural gas exchange. Over-the-counter (OTC) contracts – long-term agreements struck outside of the power exchange between energy producers and buyers – have also developed successfully[6].

At the turn of the century, EU energy policy began to extend beyond energy market liberalization and competitiveness. Amid rising environmental awareness, the focus started to shift away from fossil fuels and toward the development of RES capacities. Since then, the EU has consistently pursued green transformation goals in three overarching areas: the reduction of GHG emissions, an increase in the share of RES in the final energy consumption, and improvement of energy efficiency. In fact, with the announcement of the *European Green Deal* in 2019, the EU climate ambitions increased further, by a considerable margin.

3 Prawo energetyczne
4 Urząd Regulacji Energetyki
5 Towarowa Giełda Energii
6 Crisis interventions in the energy market in recent years, such as the abolition of the power exchange obligation or the introduction of price caps, which affected the functioning of the market, do not fall within the scope of this paper, because, in principle, they are temporary. The overall long-term direction of the developments in the Polish energy market has been positive.

Addressing the EU's evolving ambitions, Poland laid the foundations for its national climate policy prior to accession. In 2000, the *Energy Policy of Poland until 2020*[7] was published and was a point of reference for the country's strategic vision of energy and climate at the time. With respect to the energy mix, the document largely followed the status quo, envisaging only slight reductions in the consumption of hard coal and lignite, as well as very modest increases in RES generation (Ministerstwo Gospodarki, 2000). Admittedly, at the time, it was not easy to foresee the direction in which the EU climate policy would evolve, or to envisage the extent to which technological advances would facilitate rapid developments in the mainstreaming of renewable energy sources. However, Poland did not keep pace with the ambitious level of the EU policy during the two decades that followed, neglecting both the economic and political rationale behind the transition away from fossil fuels. This was even more puzzling as the economic standing of the country's coal mines continuously deteriorated due to aging infrastructure and a lack of sound development perspectives.

2.3. Poland's coal reliance

Indeed, Poland has been set apart from its fellow Member States as, among the EU's major economies, Poland is by far the most coal dependent. As mentioned, coal is still not only the main fuel for electricity generation but is also the dominant energy carrier used in district heating systems and individual boilers. In fact, Polish households account for as much as 90% of all coal consumed by the EU residential sector (Sokołowski & Bouzarovski, 2022). Poland's large reserves of hard coal and lignite had, for decades, been heavily exploited by the Communist authorities to fuel their trademark policies: economic self-reliance, the prioritization of heavy industry, and the extortion of natural resources from satellite states to the benefit of the Soviet Union. As a result, the country entered a historical path dependence and stayed on it until today. Many Polish areas, including in Silesia, and around Bełchatów and Zgorzelec, came to depend on coal for their economic fate, and Poland remains the second largest producer of coal in the EU, the first being Germany (Eurostat, 2021).

It was only after the fall of Communism in 1989 that the structural inefficiencies of Polish coal mining were fully revealed, with the sector facing growing unprofitability due to overemployment, inflated labor costs, and increasingly unfavorable geological conditions. Several attempts at reformation have been made in an effort to improve efficiency, but all resulted in only provisional patches, and none characterized a truly strategic overhaul. Over the past three decades, headcount in the sector dropped, substantially, from almost 400,000 in 1990, but the remaining 100,000 in 2015 were still, economically, unjustified. Incidentally, 85% of the reduction took place before 2002 and, thus, prior to Poland's EU accession (Szpor & Ziółkowska, 2018).

7 Polityka energetyczna Polski do 2020 roku

Between 1989 and 2022, hard coal production decreased from 178 mln tons (Główny Urząd Statystyczny, 2014) to 53 mln tons (Eurostat, 2021). However, this substantial reduction in production has not been synonymous with a corresponding reduction in consumption. To fuel the economy and to keep citizens warm in the face of the shutdown of the hydrocarbons trade with Russia, Poland had to import around 20 mln tons of coal in 2022 from a variety of, often, very distant countries (Sawicki, 2022). The high volume of imports, required mainly by heating plants and combined heat and power (CHP) plants, as well as for individual heating purposes, reflected the limited domestic production and its high prices (Zasuń, 2023). The rise of coal imports has also marked a decline in Poland's energy independence, undermining its energy security.

Unlike many other industrial sectors, coal mining has not been privatized since 1989 and has remained largely under state control, which has exposed it to political pressure. In fact, the coal sector's trade unions have, traditionally, been among the strongest in Poland, owing to an unlikely combination of the Communist partiality toward the miners and their important role in the Polish struggle for democracy during the 1970s and 1980s, including under the banner of Lech Wałęsa's *Solidarity*[8]. Due to the deep incumbency of the coal mining sector in the Polish economy and society, and despite the ever-growing pressure from EU policymakers and markets to decarbonize, trade unions have remained politically powerful and have recently strengthened their links with the government. During the past two decades, the Polish coal mining sector and its major customers (mainly electricity producers) have remained largely resistant to the transition away from coal and have openly opposed its phase-out as implied by the EU climate policy objectives.

The Polish coal mining sector and its main consumers openly opposed moving away from coal.

As a result, Poland's most recent objectives for the coal phase-out have been unambitious with regard to climate considerations and unrealistic in terms of economic feasibility. Specifically, the social contract[9] signed in 2020 between the government and the trade unions envisages coal production, in the Silesia region only, to be phased out by the end of 2049, which is a severe misalignment with the Paris Agreement and the EU policy and overlooks the sector's deteriorating economic standing.

Strong incumbent pressure, which has kept the successive governments in check for over three decades, has meant that no decisive action plan was ever proposed, and no concrete solutions for moving away from coal were legislated, yet alone implemented. This, in turn, has led to a gradual aggravation of the problem. It could be argued that, in the 1990s and early 2000s, as sweeping reforms were taking place in Poland, it would have been more politically feasible to conduct fundamental restructuration of the coal mining sector and its related activities. Unfortunately, the Overton window appears to have long closed. Restructuring attempts have led to a reduction in employment and production, but the mines that have remained in operation have also remained out of profit and require state subsidies merely to survive (Siedlecka et al., 2017). The lack of a constructive dialogue and concrete action aimed at transforming the Polish coal regions leaves the coal issue "adrift", continually deepening the problem (on this pressing issue, also see WiseEuropa's dedicated report by Skubida et al. (2023).

8 Solidarność
9 Umowa społeczna

2.4. Political inertia and a lack of ambition

For most of the period between 2000 and 2020, the EU climate and energy policy served only to determine the general framework for the respective national policies, in line with the EU's principle of subsidiarity. The framework had revolved around the following pillars:

- Target setting,
- Norm and standard setting,
- The EU Emissions Trading System (ETS), putting a price on emissions in selected sectors
- Policy harmonization across EU Member States.

However, recent years have brought greater EU engagement, mainly through the adoption of the *Fit for 55* package and through a transfer to the EU of greater financial control. This has led to a marked variation in the pace at which the respective Member States are carrying out their energy transformation objectives. As mentioned, Poland's policy regarding the reduction of GHG emissions upon joining the EU was relatively unambitious and largely followed the status quo.

Likewise, in the following years, the decision makers embraced modest transformational trajectories and advocated coal as the dominant source in Poland's energy mix. This was demonstrated in the, then, Prime Minister Donald Tusk's statement that the delay was advantageous, as swifter changes would have made electricity too expensive. Tusk stressed the importance of constructing an energy mix that would be "free of the ideological inclinations that have surfaced in Europe" (Kowalczyk, 2014). In late 2016, following a change to the cabinet, the new Prime Minister, Beata Szydło, declared that "Polish coal will become the synonym of 'modernity'" and that its economic prospects are promising ("Beata Szydło: polski węgiel będzie synonimem nowoczesności", 2016).

Instead, decision makers promised large-scale investments in new mining capacities in Silesia, as well as the development of Ostrołęka C in the country's northeast, conceived as Poland's last large coal generation unit. The construction of the latter was eventually halted halfway through, incurring a massive 1 bln PLN (220 mln EUR) in sunk costs. Furthermore, the so called *10H Act* was passed, which prohibited the development of wind turbines within the distance of 10 times the height of a given turbine to residential buildings or to protected natural areas. This piece of legislation was eventually amended in 2023, but it had been blocking the growth of onshore wind farms in Poland for a long time. Poland was also the only Member State not to have adopted the EU's climate neutrality goals; representatives of the Polish government voted against solutions proposed under the *Fit for 55* package and were alone in their opposition (Ryncarz, 2023). The country also attempted to block the EU ban on the sale of new petrol and diesel cars scheduled for 2035.

Legislative barriers to RES development have persisted over the years, including a lack of adequate policies with regard to cable pooling and direct lines (only introduced in 2023), as well as distance restrictions for onshore wind deployment. In fact, Poland did not recognize RES as a strategic element of its energy transition until the end of the 2010s, when the government launched its relatively successful program *My Electricity*. Under the program, one-time allowances are granted to households for the purchase of solar PV installations. Originally, the net-metering system was in force, through which prosumers benefited from compensation based on the amount of electricity produced by their installations. In 2022, the government decided to deploy a net-billing system, in which prosumers are compensated based on the wholesale rate of the electricity produced. This kind of instability creates uncertainty for PV installation owners and may hamper further growth of such installations.

Another governmental program in operation is *Clean Air*, which offers subsidies and tax relief for heat source replacement and the thermal modernization of buildings. However, the commitment of public funds to the energy transition remains insufficient, as epitomized by the highly non-transparent spending of the ETS related funds. The EU ETS is a cornerstone of EU climate policy and one of the most potent tools available to Member States in support of their energy transition efforts. However, from the 11.2 billion EUR available to Poland between 2012 and 2020 from a derogation under Article 10c[10], and from its national auction pool, only 4 billion EUR was channeled to energy transition efforts. Moreover, 75% of that spending has been questioned with regard to its relevance to the decarbonization objectives as outlined in the ETS directive (Kobyłka et al., 2023).

In addition to Poland's "drifting" approach to the coal phase out, the Polish Nuclear Program is a glaring example of neglect. According to the initial plans made in the 2010s, the first reactor should commence operation in 2024. However, due to political mismanagement, the program is significantly delayed, and no substantial action was taken between 2012 and 2020. Historically, Poland had attempted to develop nuclear energy capacity in the 1980s, but the construction of the plant was shut down at a moderately advanced stage. Among the main reasons were social resistance (partly caused by the Chernobyl disaster), the lobbying of the coal trade unions, and costly delays.

Poland's efforts to reduce emissions have been scattered and have existed only in selected areas. The country's climate and energy policy has remained inconsistent, suggesting internal chaos. It could be implied from the decisions of the consecutive governments that Poland was only willing to meet the EU's minimum climate policy targets, if at all. In particular, the country had opposed several cornerstone policies, most notably the EU ETS and the Fit for 55 package. In addition, Poland's access to the Recovery and Resilience funds was blocked. This was largely due to concerns over the rule of law, but it was also down to its 10H Law and infringements related to the continued operation of the Turów coal mine. As a result, the relationship between Poland and the EU in the context of the energy and climate policy has been uneasy. The country has played the role of (an often defiant) recipient of the policy rather than an active voice in EU policymaking, to which the status of the EU's 5th largest economy might be predisposed.

10 The derogation gives Member States the possibility of free allocation of allowances to electricity producers on the condition that the latter invests in projects aimed at modernization and decarbonization of the energy mix.

2.5 Institutional framework

Following Poland's accession to the EU, the institutions responsible for the energy sector, the energy transition, and the climate have changed frequently. Between 2003 and 2023, the principal Ministry in charge of the energy policy itself changed six times. It was not until 2019 that the Ministry responsible for climate issues – the Ministry of Climate – was established. Today, authority over climate and energy policy is dispersed across several ministries, namely the Ministry of Climate and Environment, the Ministry of State Assets, and the Ministry of Development and Technology. According to a 2021 report by the national Supreme Audit Office, recent changes in the governmental structures were “as a rule, made without adequate *vacatio legis*, and often with retroactive effect”. In the Office’s view, some of the restructuring efforts lacked rationale, leading to organizational and legislative turmoil (Najwyższa Izba Kontroli, 2021).

> *The lack of institutional continuity and political leadership hindered the administration in achieving strategic goals.*

Lacking institutional continuity and political leadership have hindered the administration’s capability to act in a coherent and long term fashion toward strategic goals. For instance, despite the legal obligation to update the energy policy every 4 years,[11] the *Energy Policy of Poland until 2040* (EPP2040), i.e. the current strategy, had a delay of 8 years: it was published in 2021, while the previous one had dated back to 2009.[12] Moreover, the legislative process has been marred by problems with transparency and inclusivity. For instance, the EPP2040 and the *National Energy and Climate Plan for the Years 2021-2030* were drafted in absence of adequate stakeholder and expert consultations. The overall lack of a stable regulatory environment to promote decarbonization, including clean technologies, has also discouraged firms, both foreign and domestic, from making relevant investments in the country.

Furthermore, the uptake of climate-related legislation in Poland has, at times, fallen short of EU obligations. For instance, Poland continues as the only Member State not to have submitted the National Long-Term Strategy, which is supposed to map a 30-year perspective of Member States' energy (and broader social economic) transformation. The deadline for submission expired as long ago as in January 2020, testifying rather strongly to Poland’s inadequate institutional capacity and the low prioritization of decarbonization delineated in the previous section. It goes without saying that such irregularity in updating strategic documents seriously hinders Poland’s ability to stay on track with regard to the EU’s energy transition goals.

1 Energy Law, Art. 15a.
12 Energy Policy of Poland until 2030 (Polityka energetyczna państwa do 2030 r.).

With regard to this, it must also be noted that Poland has the third highest transposition deficit of all the Member States: at 2.1% in December 2022, it was nearly twice the EU average (European Commission, n.d.). An analysis of the transposition processes in Poland (Sokołowski & Stolicki, 2017) indicates that the causes of the country's compliance deficit can be identified at the governmental stage of the legislative process. In particular, the following explanations for the governments' prolonged work on legislation have been suggested::

- An increase in the number of EU directives, adding to the administrative burden,
- An increase in the complexity of the matters under regulation,
- Institutional and organizational inefficiency,
- Deliberate delaying of the transposition process by the government for political reasons.

The problem becomes even more acute once implementation is considered holistically, as it spans more than the transposition itself. As the key EU documents – including the Treaty of the European Union – imply, implementation must be accompanied by credible governance and monitoring mechanisms to ensure actual compliance with the legislation (Maśnicki, 2015). In this context, the operation of the EU ETS in Poland is an example of inadequate implementation despite adequate transposition. According to the EU ETS Directive,[13] Member States are required to allocate at least 50% of their ETS auction revenues to a range of measures supporting the energy transition. However, multiple items reported by Poland for the years 2013–2020 raise doubts as to their compliance with the Directive. Examples include financial support for the green certificate system (which lacked an additionality effect) and the practice of reporting tax exemptions as climate protection expenditure (used to compensate for the lost budgetary revenue, but the exact allocation of which is impossible to determine) (Frączyk, 2022).

2.6. State-owned electricity producers: laggards of the transformation

Prior to the implementation of the *Energy Law* in 1997, all energy companies in Poland were state enterprises, and energy prices were fixed by the Ministry of Finance (Urząd Regulacji Energetyki, n.d.). With the establishment of the energy market, the state enterprises were transformed into corporations controlled by the State Treasury before releasing the shares for public sale. Foreign companies began operation in the electricity generation market, with Électricité de France (EDF) claiming the largest share, at 10%.

13 Article 10(3).

Between 2000 and 2007, the government carried out a restructuration of the energy sector, which, eventually, led to a major consolidation into four vertically integrated companies in the area of generation and distribution – ENEA, Energa, Polska Grupa Energetyczna (PGE), and Tauron (Zamasz, 2015) – which all remain in operation as publicly traded, Polish companies. A decade later, the generation market saw further consolidation. With EDF withdrawing from Poland after a decision to surrender coal assets, the company's eight thermal power plants, heat distribution networks, and the Rybnik Power Station were sold to PGE (Polska Grupa Energetyczna, n.d.). Nationalization also affected the Połaniec Power Station, which was sold to ENEA by France's Engie in 2017. As a result of the consolidation, the share of the electricity generation of State-Owned Enterprises (SOEs) grew from 56% in 2015 to 70% in 2021. Further, between 2020 and 2022, the Polish petroleum SOE ORLEN acquired three large companies: Energa (generation and distribution of electricity), PGNiG (oil and gas), and LOTOS (oil), becoming a multi energy conglomerate as a result. Currently, German-owned E.ON Polska, which distributes energy in Warsaw, is the only foreign company with a major stake in the Polish energy market.

The participation of State Treasury companies in electricity production increased from 56% in 2015 to 70% in 2021.

Although multiple entities, which did not have ties to the State Treasury, operated in the electricity generation market for years, the state never gave up control over the better part of the generation capacity. The persistence of such a holding structure fueled consolidation of the market and served to strengthen the links between the power companies and the government, resulting in the sector's politicization. Combined with the fact that almost all of the electricity produced by those companies has been generated from coal, Poland's energy transition has suffered considerable obstruction.

High market concentration also persists in the area of distribution. Although unbundling has taken place (as required by EU law), individual distribution system operators (ENEA Operator, Tauron Dystrybucja, and PGE Dystrybucja) still belong to state-owned energy groups, which are involved in other areas of the sector. This implies potential violations, including harmful exclusions in accessing the grid and operational data.

In 2001, the European Commission published the 1997 White Paper on renewable energy sources, introducing the target of 12% of gross inland energy consumption from RES by 2010. Subsequently, the EU adopted Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market, which created the need for the development of a RES support system in Poland (Rok, 2007). In 2015, green certificates were introduced; tradable assets were used to attest that a given amount of electricity was generated using renewable energy sources. Because transmission and distribution operators are required by Poland's Energy Law to purchase RES-generated electricity (this is referred to as the *Renewable Portfolio Standard*), producers of such electricity can sell their certificates to such entities and, thus, generate income.

The inclusion of biomass co-firing and of existing hydropower plants in the system was viewed as controversial. In the long term, this was expected to translate to an increase in biomass co-firing in coal fired power plants owned by SOEs, solidifying their positions, while, to a lesser extent, supporting renewable energy sources, which require the construction of new capacity and infrastructure (Derski, 2016). Indeed, experts indicate that the green certificate system should not cover biomass co-firing due to the disproportionately low investment needed to implement or expand it, compared to investment in RES.

Unsurprisingly, between 2005 and 2015, a third of the certificates issued (41.5 TWh) were allocated to biomass co-firing. The wind sector ranked second (36.7 TWh), with the wind capacity increasing by 4.5 GW over this period, compared to a mere 83 MW of installed capacity prior ("PIGEOR o funkcjonowaniu systemu zielonych certyfikatów", 2017). This development can, partially, be attributed to the green certificate system. However, in 2015, the green certificate system collapsed due to an oversupply of certificates. In turn, the government implemented a more popular and more efficient auction system, under which green certificate installations were allowed to migrate. Despite the barriers, the RES market developed strongly between 2005 and 2020, although with little participation from SOEs.

SOEs benefited from political favoritism, which displaced competition in the area of renewable energy sources.

The inclusion of biomass co firing in the green certificate system was an example of a more general, and harmful, trend. SOEs have benefitted from political favors, skewing their incentives and crowding out their competition. Another case in point is the improper use of derogation under the ETS Directive, discussed in the Political Inertia and a Lack of Ambition section. Yet another case was the support granted to Energa for the development of the Ostrołęka C coal-fired power plant unit, a project that ended in a major failure (see section Political Inertia and a Lack of Ambition). In turn, PGE – Poland's largest electricity producer – recently reversed its decision to bring forward its carbon neutrality target from 2050 to 2040. The company changed course less than a week after its announcement of the new strategy due to the political fallout that it caused (Charlish & Strzelecki, 2023).

The energy SOEs' oligopolistic grasp on electricity generation, combined with the lack of political support and strategic vision, caused them to enter a decision-making drift, in which none developed a long-term transformation policy. While Western companies diversified their generation portfolios by strategically withdrawing from incumbent coal assets and investing in new technologies (cf. the case of EDF mentioned above), Polish companies remained focused on conventional power generation and related investments, choosing to lobby for the status quo. Being market leaders, they failed to lead innovation and technological change, largely disregarding the energy transition and related investment opportunities. Despite accounting for 64% of the total electricity generated, they only produced 19% of all RES electricity in 2022. Indeed, Poland's electricity decarbonization has, so far, been led by private companies and prosumers[14]

14 Based on data from the Energy Regulatory Office (Urząd Regulacji Energetyki), the Energy Market Agency (Agencja Rynku Energii), and annual reports of the SOEs.

The decarbonization of electricity in Poland has so far been primarily implemented by private entrepreneurs and prosumers.

As coal assets became a burden, carbon prices increased, and RES became more price competitive, the government proposed to create a National Agency for Energy Security (NABE). The Agency would act as a holding company to comprise all, or almost all, of Poland's coal assets. The rationale is to clear SOEs of coal assets and enable easier financing for low-emission investments. The SOEs' heavy reliance on coal presently deters investment due to the related regulatory and operational risks: the demands of the EU climate policy, wage pressures, restructuration difficulties, and the need to implicitly subsidize coal production at loss-making mines. Unfortunately, the NABE would represent a step toward even greater market concentration and further erosion of the remaining competitive mechanisms.

Rather than a further consolidation of coal assets, Poland's energy SOEs need a realistic, but ambitious, coal phase-out plan and transformation strategy. The creation of the NABE would only be justified if it was accompanied by a credible coal phase-out plan, and only if those coal units, which are indispensable for the uninterrupted operation of the electricity system (along with any binding reserve requirements), were retained. This, in turn, must correlate with the deployment of increased capacity in low-carbon energy sources. The lack of such action is not only unjustified from the point of view of the EU climate policy, which continues to place upward pressure on carbon prices, but also from the perspective of economic and energy security, as Polish coal production has long become uneconomical.

3. Conclusions & recommendations for Ukraine

As in many other areas, there are important historical similarities between Poland's and Ukraine's energy sectors. Both countries faced the challenge of a transition from a centrally planned economy to a market based system and, although each took a largely divergent path, that experience affected their energy sectors. Poland's subsequent integration with the EU can help Ukraine avoid the mistakes that have hindered the Polish energy transition, and benefit from the good practices that the country demonstrated during the process.

The European Union has continued to hone its interconnected energy markets, and has intended to ensure the most cost-effective, secure, sustainable, and affordable energy supply to EU citizens. In the context of climate action, the EU's goal is now to bring about a complete decarbonization of electricity production, which, as decarbonization progresses, is poised to become the dominant energy carrier. Importantly, this policy also has an economic and social edge, which considers the scarcity of EU fossil fuel reserves and the Bloc's resulting dependence on imports, as well as an exposure to the volatility of prices.

The goal of the European Union has become the complete decarbonization of electricity production.

With Ukraine set firmly on the path to EU membership, the country will be required to participate in the increasingly integrated energy market and obligated to decarbonize its electricity sector. Compared to Poland, Ukraine's electricity sector is characterized by a much smaller share of coal in the generation mix, which is due to its large capacities in nuclear and hydroelectric power. However, after the war, Ukraine is apt to face similar challenges to those faced by Poland in the 1990s and onward: an ageing array of (conventional and nuclear) plants, transmission, and distribution infrastructure in need of modernization, and an increased demand for electricity. In addition, the country will also face (as it is already seeing every day) a reduction in capacity due to the damage done by the Russian invader.

Instrumental to facing these challenges will be the establishment of a truly competitive electricity market, which will make the prices of electricity, other energy carriers, and their derivatives more realistic, allowing for more informed consumption and unlocking investment in the sector. Similar to that of Poland, Ukraine's electricity sector is highly consolidated. In 2018, most of the electricity produced domestically was generated by only three companies: Energoatom (53–58%), DTEK Group (23%), and Ukrhydroenergo (7%). As pointed out by OECD, the market in Ukraine requires significant reforms to improve transparency, increase market liquidity, and reduce excessive intervention (OECD, 2023). Encouraging competition will improve productivity and energy efficiency within the sector while reducing the emissions. Along the way, decision makers must also protect vulnerable groups.

The Ukraine's electricity sector is highly consolidated.

Compared to Poland in the past, Ukraine in the future will be tasked with the implementation of a decidedly broader acquis. At the same time, it will have to navigate between the energy trilemma – social equity, environmental protection, and energy security – which will undoubtedly constitute a challenge. Poland's example indicates that the greatest difficulty may lie in the broader implementation of energy and climate policies, i.e., in accommodating for EU values rather than in the mere transposition itself. Energy is fundamental to modern society and is, hence, a highly politicized theme. The centrally planned economies of the Polish and Ukrainian pasts tend to favor monopolies and oligopolies in the energy sector, leading to the emergence of strong pressure groups, such as the mining trade unions in Poland. In such cases, social awareness, political will, and a strategic vision are indispensable, but, in Poland, are lacking.

The EU's clear and decisive decarbonization policy, which sets standards, imposes obligations, and puts growing pressure on the price of pollution, but also incentivizes technological progress, has not been met with adequate responses from the successive Polish governments. Poland has failed to recognize the long term consequences of obstructing decarbonization in the energy sector, which has exacerbated its problems, including the dwindling profitability of coal mining, aging conventional power plants and other infrastructure, and inefficient, coal-heated buildings. To prevent a similar fate, a clear transition strategy, monitoring, and governance must be put in place by the Ukrainian decision makers and be monitored by Ukrainian's civil society. Admittedly, Poland's example shows the difficulties in creating a cross-political consensus on the sector's overall direction.

However, once achieved, a coherent vision will allow for the creation of a predictable regulatory environment, which lays out the reforms needed, sets ground for the allocation of public funds (or for the development of other appropriate financial mechanisms) and incentivizes private investment. Crucially, this requires strong and well-functioning institutions that can manage the transition. Accordingly, Ukraine faces the challenge of the full dismantling of its oligarchic system, which has historically impeded competition and transparency across many sectors, including in the energy sector. Relatedly, the problem of corruption has the potential to substantially undermine the development of institutions that are tasked with the broadly understood energy transition (Bukowski et al., 2023).

Ukraine faces the challenge of the full dismantling of its oligarchic system.

A positive outlook is that Ukraine is already progressing toward a high-level action plan. Examples of such efforts include the recently adopted *Energy Strategy of Ukraine until 2050 (ESU 2050)*, which supersedes the ESU 2035, and the *National Energy and Climate Plan*, a document required by the *Governance Regulation*, which is currently under way.

Ukraine seeks integration with a European Union that differs significantly from the EU that Poland joined in 2004. Almost two decades later, the EU is at a much more advanced stage of legislative and institutional development and is placed in a different economic, technological, and environmental global context. The previous, relatively modest, volume and depth of energy-related legislation has been expanded substantially, with new legislative acts designed to create and integrate not only energy markets per se, but also the strategic visions of countries with regard to their energy transition toward sustainability. Global technological progress, induced largely by the demand for sustainable technologies created in the European Union, has allowed this type of electricity production to reach market maturity.

However, rising energy prices in Europe and the risk of supply shocks on global energy markets mean that energy is increasingly affecting the competitiveness of companies and the well being of households, with the latter of particular concern to lower-income countries.

It can hardly be disputed that Ukraine faces a myriad of political, institutional, and social challenges. However, like Poland 20 years ago, Ukraine also stands at the verge of a historic opportunity to build a sustainable and resilient economy. Its way will be marked by the common and competitive energy market, the extra funds for the reconstruction and the transformation, and the EU's strategic vision.

References

Beata Szydło: polski węgiel będzie synonimem nowoczesności. (2016, December 2). Money.pl. https://www.money.pl/gospodarka/wiadomosci/artykul/beata-szydlo-polski-wegiel-silne-gornictwo,161,0,2211745.html

Bukowski, M., Kobyłka, K., Sobkiewicz, M. (2023). Ukraine's energy transformation: decoupling from fossil fuels and Russia. *In United Business for Ukraine. Sustainable reconstruction of Ukraine.* UN Global Compact Network Poland.
https://ungc.org.pl/wp-content/uploads/2023/10/22United-business-for-Ukraine-%E2%80%93-Sustainable-reconstruction-of-Ukraine22-1-1.pdf

Charlish, A., Strzelecki, M. (2023, September 4). Poland's PGE reverses decision to bring forward carbon neutrality target. *Reuters.*
https://www.reuters.com/sustainability/climate-energy/polands-pge-reverses-decision-bring-forward-carbon-neutrality-target-2023-09-04/

Derski, B. (2016, November 7). Co dalej z zielonymi certyfikatami? *Wysokie Napięcie.*
https://wysokienapiecie.pl/1861-zielone-certyfikaty-cena-nadpodaz-obowiazek-2016-2020/

European Commission. (n.d.). *Transposition.*
https://single-market-scoreboard.ec.europa.eu/enforcement-tools/transposition_en

Eurostat. (2021). *Coal production and consumption statistics.*
https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Coal_production_and_consumption_statistics

Frączyk, A. (2022). *Kreatywna księgowość. Jak Polska marnuje środki z EU ETS.* ClientEarth.
https://www.clientearth.pl/media/wz5h00b5/20220518-kreatywna-ksi%C4%99gowo%C5%9B%C4%87-jak-polska-marnuje-%C5%9Brodki-z-eu-ets-raport-fundacji-clientearth.pdf

Główny Urząd Statystyczny. (2014). *Polska 1989–2014.*
https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5501/13/1/13/oz_polska_1989-2014.pdf

Hellman, J. S. (1998). Winners Take All: The Politics of Partial Reform in Postcommunist Transitions. *World Politics, 50(2)*, 203–234.
https://doi.org/10.1017/S0043887100008091

Kobyłka, K., Laskowski, K., Śniegocki, A. (2022). *Assessment of the National Long-Term Strategies of the Visegrád Group Countries.* WiseEuropa.
https://www.ecologic.eu/sites/default/files/publication/2022/30008-LTS-Assessment-Visegrad-group-countries.pdf

Kobyłka, K., Miłobędzka, A., Sobkiewicz, M. (2023, March 31). *Evaluation of the impact of the EU ETS revenues and derogation under Article 10c on investment and infrastructure in Poland. An ex-post analysis.* WiseEuropa.
https://www.4i-traction.eu/sites/default/files/2023-04/4iT_2023_Case_Study_6_EUETS_derogations_Poland.pdf

Kowalczyk, A. (2014, January 10). Tusk tłumaczy się z ustawy o OZE. *Rynek Infrastruktury.*
https://www.rynekinfrastruktury.pl/wiadomosci/intermodal-i-logistyka/tusk-tlumaczy-sie-z-ustawy-o-oze-11454.html

Maśnicki, J. (2015). Koncepcje implementacji prawa pochodnego. *Studia Europejskie, 2015(2)*, 99–119.
http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ekon-element-000171414609

Ministerstwo Gospodarki. (2000, February 22). *Założenia polityki energetycznej Polski do 2020 roku.*
https://orka.sejm.gov.pl/Rejestrd.nsf/wgdruku/1789/$file/1789.pdf

Najwyższa Izba Kontroli. (2021). *Sprawozdanie z działalności Najwyższej Izby Kontroli w 2021 roku.*
https://www.nik.gov.pl/plik/id,26137.pdf

OECD. (2023). *Competition Market Study of Ukraine's Electricity Sector.*
https://doi.org/10.1787/f28f98ed-en

PIGEOR o funkcjonowaniu systemu zielonych certyfikatów. (2017, August 2022). *CIRE.*
https://www.cire.pl/artykuly/opinie/126527-pigeor-o-funkcjonowaniu-systemu-zielonych-certyfikatow

Polska Grupa Energetyczna. (n.d.). *Zakup aktywów EDF w Polsce.* Raport Roczny 2017.
https://raportzintegrowany2017.gkpge.pl/t/pl/notes/zakup-aktywow-edf-w-polsce.html

Rok, T. (2007, June/July). Obecne i przewidywane systemy certyfikatów w elektroenergetyce (artykuł dyskusyjny). *Energetyka.*
https://www.cire.pl/pliki/2/systemycertyfikat.pdf

Ryncarz, K. (2023, April 28). Fake of the Week: Polish opposition to blame for the Fit for 55 package. *Euractiv.*
https://www.euractiv.pl/section/demokracja/news/fake-of-the-week-polish-opposition-to-blame-for-the-fit-for-55-package/

Sawicki, B. (2022, December 28). Ile węgla i skąd Polska importowała w 2022 roku. Rekord niemal pobity. *Rzeczpospolita.*
https://energia.rp.pl/wegiel/art37680201-ile-wegla-i-skad-polska-importowala-w-2022-roku-rekord-niemal-pobity

Siedlecka, U., Śniegocki, A., Wetmańska, Z. (2017). *Ukryty rachunek za węgiel 2017. Wsparcie górnictwa i energetyki węglowej w Polsce – wczoraj, dziś i jutro.*
https://wise-europa.eu/wp-content/uploads/2017/09/UKRYTY-RACHUNEK-raport-internet.pdf

Skubida, A., Głowacki, K., Sarna, K. (2023). *Drift or Navigation? Coal Regions Facing Transition.*
https://wise-europa.eu/en/2023/03/30/16308/

Sokołowski, J. K., Bouzarovski, S. (2022). Decarbonisation of the Polish residential sector between the 1990s and 2021: A case study of policy failures. *Energy Policy, 163.*
https://doi.org/10.1016/j.enpol.2022.112848

Sokołowski, J. K., Stolicki, D. (2017). Przyczyny opóźnień w transpozycji dyrektyw europejskich do polskiego porządku prawnego w świetle analizy ilościowej krajowego procesu legislacyjnego. *Przegląd Politologiczny, 2017(2),* 39–54. 10.14746/pp.2017.22.2.3.

Szpor, A., Ziółkowska, K. (2018). *The Transformation of the Polish Coal Sector.* Global Subsidies Initiative.
https://www.iisd.org/system/files/publications/transformation-polish-coal-sector.pdf

Urząd Regulacji Energetyki. (n.d.). *1997.*
https://www.ure.gov.pl/pl/25-lecie-ure/25-lat-ure-z-kartek-kalend/10034,1997.html

WiseEuropa. (2021). P*olish Sustainable Recovery Monitor – September 2021 issue.*
https://wise-europa.eu/wp-content/uploads/2021/10/Polish-Sustainable-Recovery-Monitor-September-Issue.pdf

Zamasz, K. (2015). Uwarunkowania ekonomiczno-regulacyjne konsolidacji krajowego sektora elektroenergetycznego. *Polityka Energetyczna, 18(2),* 19–28.
http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ekon-element-000171405665

Zasuń, R. (2023, October 12). Węgiel najdroższy w historii, a PGG brakuje 2 mld zł. *Wysokie Napięcie.*
https://wysokienapiecie.pl/93237-wegiel-najdrozszy-w-historii-a-pgg-brakuje-2-mld-zl/

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ENVIRONMENTAL PROTECTION

Reconstruction of Ukraine from the Perspective of its Future EU Accession: Lessons from the Polish Transformation

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Summary

The process of Ukraine's integration into the EU will be difficult, expensive, and lengthy, and will greatly affect the state's environmental policy stakeholders. However, these challenges should not be hidden from the public; rather, they should become the subject of public discussion. This will allow stakeholders to better prepare for the accession process, reduce the risk of the debate being dominated by unverified information and myths, and facilitate the development of ways to implement new socially acceptable environmental requirements.

Over the past 25 years (i.e., since Poland began accession negotiations), EU environmental policy has developed significantly, especially in the areas of climate protection, waste management, and nature conservation. Poland's experience, therefore, does not fully reflect the situation of Ukraine today. However, through the analysis of Poland's accession process from the perspective of environmental protection it has been possible to draw strategic conclusions and identify analogies that can facilitate and accelerate the accession process in Ukraine. The most important of these are summarized below:

- One of the goals of EU environmental law is to ensure equal competition conditions for economic entities from all Member States. Therefore, both the transposition of EU environmental regulations into national legislation and their physical fulfillment are prerequisites for EU membership.

- The process of adapting the state to the EU's environmental protection requirements can, and indeed should, start before accession negotiations are launched. One element of this process should be the adoption of the principle that public funds will not support projects that contradict the goals of EU environmental policy. A similar principle should apply to foreign investments: they should be implemented following the requirements of EU environmental law.

- Ukraine should consider adopting the principle of subsidiarity in environmental protection, i.e., assign some of the area's responsibilities and competencies to local levels of public administration. Indeed, the current environmental management structure may prove inefficient from the perspective of the timely implementation of hundreds (or even thousands) of investments bringing Ukraine's environmental infrastructure into compliance with EU law.

- The physical implementation of EU environmental requirements will be a costly process. These costs are unlikely to be lower than those of Poland (where they totaled approximately EUR 50–60 billion); given the changes that have since taken place in EU environmental legislation, they are likely to be higher. The Ukrainian government should accept that most of the funds for physical implementation of the EU requirements will have to be financed by Ukraine. It seems advisable for the Ukrainian government to start talks with creditor countries on the possible eco-conversion of a portion of the debt.

- It is desirable to examine, as early as possible, the environmental investment needs that arise from the physical implementation of the EU requirements. This knowledge will be essential to prepare sound adjustment programs and undertake adjustment work as soon as it is feasible.

1. Introduction

The principle that public authorities are responsible for ensuring the proper condition of the natural environment and its protection was formulated in 1972 at the UN Stockholm Conference.[1] The idea was quickly accepted by the European Council and, as early as December 1972, the EEC's first environmental action program was adopted. Currently, the 8th Action Program, which was published on 2 May 2022[2] (valid until 2030), is in force. Its goals are not obligatory for Member States, but they are of vital importance to them, as they set the directions the European Union (EU) prioritizes during a given period.

For a long time, environmental policy was implemented in the EU without a strong treaty basis. It was only established in 1987 in the Single European Act. In 1993, the Maastricht Treaty recognized the environment as an official EU policy area, and the 1999 Treaty of Amsterdam established the obligation to integrate environmental protection into all EU sectoral strategies. From the very beginning, the EU was also at the forefront of the EU's UN Framework Convention on Climate Change (UNFCCC) negotiations, calling for the most restrictive solutions possible. Aside from climate concerns, there were two pragmatic reasons for this. First, the EU saw the increased standards as a way to reduce its dependence on fossil fuel imports from third countries, primarily through the development of renewable energy sources and increased energy efficiency. Second, the increased standards were intended to ensure that the European economy would become more competitive in the international market through the development of green, low- and zero-emission technologies.

The 2009 Lisbon Treaty recognized that one of the EU's goals is to combat climate change and ensure sustainability. The fact that environmental protection has been at the center of European policy from then on is evidenced by the adoption of the *European Green Deal* strategy in December 2019, which sets out the actions necessary for the EU to achieve climate neutrality and ensure a high level of environmental protection.[3] However, subsidiarity is still the principle of EU environmental policy, which means that the European Commission takes action in this area only when the problem cannot be solved at the level of Member States, and actions at the EU level are required to protect human health or improve the natural environment.

While the primary goal of EU environmental law is to ensure the natural environment is in good condition so that the health security of EU residents and a high standard of living are secured, it also has economic significance. Aware of the impact of environmental demands on the competitiveness of enterprises, and in the light of the principle of the Common Market, the European Commission introduces regulations to ensure that such standards for companies operating in various EU countries are the same. Therefore, the obligation to harmonize the entire acquis communautaire in the area of the environment and the actual implementation of the requirements under EU regulations is a prerequisite for membership in the Union. Of course, derogations and adjustment periods are possible. The EU may give consent for individual acts and legal norms, but only in justified cases and for specified periods.

1 UN. (1973). The Declaration of the United Nations Conference on the Human Environment. In: Report of the United Nations Conference on the Human Environment. New York A/CNF.48/14/Rev.1.

2 Decision (EU) 2022/591 of the European Parliament and of the Council of 6 April 2022 on a General Union Environment Action Program to 2030 OJ L 114, 12.4.2022, p. 22–36.

3 Communication from the Commission to the European Parliament, the European Council, the Council, the Economic and Social Committee and the Committee of the Regions. European Green Deal. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019DC0640.

Therefore, the process of adaptation to the EU's environmental protection standards can, and indeed should, start well before the launch of accession negotiations and/or obtaining membership. In the case of Ukraine, whose process of adaptation to the EU's environmental requirements will run in parallel with the reconstruction of a country devastated by Russia's bestial attacks, this will present both a threat and an opportunity. It will be a threat if the prospect of short-term political advantage becomes more important than making EU-compliant investments, but an opportunity if the Ukrainian authorities avoid the temptation to rebuild destroyed infrastructure as quickly and as cheaply as possible, and instead require that reconstruction projects for the destroyed infrastructure comply with the EU's environmental requirements. To take advantage of this opportunity, it is essential to adopt the principle that public funds will not support investments that contradict the goals of EU environmental policy. A similar principle should apply to foreign investments made in Ukraine; they should be implemented in accordance with the requirements of EU environmental law.

The purpose of this paper is to discuss Poland's experience of the European integration process in relation to the environment. Good practices that Ukrainian negotiators and decision makers can benefit from will be presented, as well as mistakes that Poland made in its efforts to obtain EU membership that Ukraine should avoid. The analysis of Poland's experience in the area in question will allow us to formulate conclusions and recommendations that may be of interest to experts and decision makers in Ukraine.

Since Poland's decisions and actions in the years preceding the accession negotiation process were also important from the viewpoint of its accession process, and its current position in the EU is influenced by post-accession events, this chapter will discuss processes and actions from three perspectives:

- The transition from a socialist economy to a market economy – i.e., the actions and experiences of 1989–1995, from the formation of the first non-communist government to the assumption of the office of President of the Republic of Poland by left-wing politician Aleksander Kwaśniewski – which symbolically marked the end of the system transformationj,
- The pre-accession period and integration negotiations, the period between 1997 and 2004 – i.e., from the Polish government's adoption of the National Integration Strategy for Poland's accession to the EU,
- The first years after accession to the EU, from 2004–2015 – i.e., the end dates of the negotiated adjustment periods for implementing EU directives.

The paper will end with conclusions and recommendations that stem from Poland's accession experience in the area of the environment and that may be of interest from a Ukrainian perspective.

1.1. The achievements of the first transformation (1989–1995)

At the end of the 1980s, Poland had a highly degraded natural environment and a poorly developed environmental infrastructure. This posed a direct threat to the quality of life and health of its people. Therefore, during the period of system transformation – from an authoritarian socialist system to a capitalist democracy – environmental improvement was made a political priority and had high public support. This allowed for the introduction of measures that were important for the subsequent European integration process, including:

- the creation of an action strategy (environmental policy) setting out the directions of action, environmental protection goals and ways to achieve them in the short, medium and long term,
- the creation of an institutional system of public entities with competencies and responsibilities for the implementation of environmental policy goals;
- the creation of a set of environmental policy instruments.

Also important for the effective implementation of environmental regulations was the activity of environmental NGOs, which not only controlled the public authorities' directions and methods, but also pointed out the directions of the necessary work and put pressure on the authorities to achieve the environmental protection goals. Members of these organizations advised on legal acts and investment projects, and their opinions often helped avoid mistakes that could later hinder the implementation of EU environmental law requirements. Although it was not possible to achieve all the intended goals in these areas (primarily in terms of moving away from fossil fuels, increasing the role of public transportation, and reducing car usage, as well as stricter regulations on waste management and nature protection), the changes that were introduced at the time facilitated the subsequent process of European integration.

As early as 1991, the Parliament of the Republic of Poland adopted the Polish Environmental Policy (PEP), the first strategy for environmental protection. This not only made it possible to effectively coordinate planned environmental activities, but also helped create political and social consensus around them. The PEP introduced two principles, which were both important for Poland's accession to the EU:

- The socialization of environmental protection. Its consequence was the introduction of regulations mandating public consultation in the investment process, primarily in the environmental impact assessment (EIA) procedure. The requirement to conduct an EIA for certain types of investments is mandatory in the EU, as is the obligation to consult the public in its course (which was already a formal requirement of the EU for financing certain types of investments), and this facilitated Poland's absorption of EU funds, as well as ensuring consistency with Community's procedures. In addition, the introduction of the institution of strategic environmental impact assessments made it possible to avoid erroneous decisions – in terms of environmental protection – at an early stage in the preparation of policies, strategies, and plans,

- Subsidiarity, i.e., the transfer of competencies and responsibilities in environmental protection to the lowest levels of government, primarily to municipalities [gminy]. As a result, they have become responsible for many areas of environmental protection, including the supply of drinking water to residents, the development of sewerage and wastewater treatment facilities, and waste collection and management. This was extremely important during the accession period and, as a result, a significant number of investments related to the implementation of EU environmental regulations were made and coordinated by more than 2,000 local governments, rather than a single institution at the central level or a few or a dozen entities operating at the regional level. Moreover, since many of these investments were treated as important from the point of view of local communities (e.g., the expansion of water and sewage networks or waste management), they were co-financed by local governments or implemented on a commercial basis by municipal companies

In addition to these and other principles, the PEP defined the basic goals to be achieved in the area of environmental protection and described the structure of the system for managing it in Poland, including the institutional system, the essential changes in environmental law, and the necessary instruments.

From the perspective of integration with the EU, the most important aspect was to create stable financing for pro-ecological investments.

Among the institutions created in and after 1989, the most important – in terms of the later EU integration – was the creation of entities to ensure stable financing of pro environmental investments and the reorganization of the State Inspectorate for Environmental Protection. In July 1989, the National Fund for Environmental Protection and Water Management (the Fund) was established as an institution to provide financial support for environmental protection programs and projects at three levels: national, regional, and local. The Fund was managed by the Board of Directors, supervised by the Supervisory Board. In its operations, the Fund was guided by priorities agreed annually with the Minister responsible for the environment and water management, but – at least formally – it was independent of political power.

At the outset, the principle was adopted that the financial resources available to the Fund could not be used for non-environmental purposes. Moreover, they were to come from non-budgetary sources. This was extremely important, because thanks to this solution, despite the deep economic crisis of the early 1990s, stable financing of environmental activities was possible. To ensure financial inflows to the Fund, two basic economic instruments for environmental protection were introduced: 1) fees for economic use of the environment (e.g., for the emission of wastewater and the substances contained therein, or for the emission of particular substances into the air); and 2) penalties for excessive emissions. Their amount was indexed annually by the inflation rate, which was crucial, especially in the early 1990s, when that rate reached tens or even hundreds percent in Poland.

Another key institution was EkoFundusz [EcoFund], which was established in 1992. It was made possible because several creditor countries (France, Norway, the United States, Switzerland, Sweden, and Italy) agreed that 10% of Poland's debt to them should be allocated to environmental protection. Although EkoFundusz had significantly lower resources than the National Fund, due to its contacts with companies from creditor countries and good management, it contributed not only to the implementation of many environmental programs, but also to the introduction of many modern and innovative environmental technologies into the Polish market, nature conservation, and improved waste management.

Thanks to these two institutions, for most of the 1990s, Poland allocated approximately 2% of GDP to environmental projects (Radziejowski, Niesyto & Jeziorski, 2002; Statistics Poland's yearbooks from the 1990s). The share of investment in environmental protection during this period reached as much as 6–10% of all investment in Poland (Karaczun & Kassenberg, 2019). The fact that projects implemented not only by public entities but also by private companies were financed was important. As a result, many business entities solved their environmental problems before Poland acceded to the EU. This was significant because, as a rule, public financing of pro-ecological investments in private entities is prohibited in the EU. It can be assumed that, without support from the National Fund and EkoFundusz, many companies would not be able to comply with EU requirements, which would mean jeopardizing their competitive position, including the risk of going out of business, with all of its related social and economic consequences.

Throughout almost the entire 1990s, Poland allocated approximately 2% of GDP to environmental projects.

Also critical from the point of view of European integration were the changes that took place in the organization, structure, and operation of the State Inspectorate for Environmental Protection (SIEP). First, due to the adoption of the Act on SIEP in 1991, the Inspectorate was given broad audit powers, including the right for its employees to enter the premises of any economic entity exploiting the environment and the right to assess whether the operations of such an entity comply with environmental regulations (and if breaches were found, the right to impose financial penalties and requirements to eliminate the causes of such breaches). Second, the Inspectorate was obliged to conduct measurements and tests as part of the State Environmental Monitoring, collect environmental data and analyze observable trends. As a result, during the accession negotiations, Polish representatives had accurate information about the state of the country's environment and the level of its protection. This information was necessary in justifying Poland's position in the area of the environment, including the need to introduce adjustment periods when implementing certain directives.

During that period, in addition to tools for controlling the compliance of business entities with environmental law, Poland implemented a number of new environmental policy instruments. The key role was played by economic tools: fees for the use of the environment (they were the basis for obtaining funds by the National Fund for Environmental Protection and Water Management as well as by voivodeship budgets), penalties for non-compliance with the requirements of environmental law, and various types of subsidies (primarily grants for the implementation of environmental investments).

Efforts have also been made to create an efficient legal basis. The Acts on the Protection and Development of the Environment and Nature Protection were amended. Poland has acceded to several international conventions, including the UN Framework Convention on Climate Change, the Convention on Biological Diversity and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The so-called Sulphur and Nitrogen Volatile Organic Compound protocols to the 1979 Convention on Long-range Transboundary Air Pollution were ratified. Legislation was passed mandating environmental impact assessments of planned investments (while ratifying the Espoo Convention on Environmental Impact Assessment in a transboundary context). While much of this legislation was not fully consistent with EU requirements, it certainly facilitated the harmonization of Polish law with the EU in subsequent years.

Unfortunately, during the period in question, mistakes were also made. These concerned mainly the level of goal setting and later hindered the process of adaptation to EU requirements or increased the cost of the process. The main problems were the adoption of a short-term, rather than long-term, perspective, and the inadequacy of environmental measures concerning EU requirements. This meant that, despite the pro-environmental investments made in the early 1990s, additional measures were needed later to ensure that the result achieved was in line with the Community's expectations. An example of this may be the construction of two-stage wastewater treatment plants (mechanical and biological) in large agglomerations (over 10,000 PE[4]) instead of plants with enhanced nutrient removal. As a result, these treatment plants later had to be rebuilt and upgraded to meet the parameters required by EU regulations.

Two other mistakes that may be relevant from a Ukrainian perspective are, first, the failure throughout the 1990s to attempt to implement environmental protection requirements on farms, and second, the disregard for changes in the trends related to sources of air emissions. The former resulted in Polish farms having to incur significant costs in the short term (at the stage of accession talks) to adapt to EU requirements (including storage of natural fertilizers – manure and slurry). Nor were they prepared to ensure the proper welfare of livestock or the storage of agricultural chemicals. The consequence of the latter was the very poor air quality in most Polish cities. It turned out that, while it was possible to significantly reduce the volume of substances discharged into the air by industrial plants, emissions from sources outside the control of environmental regulations – individual heating furnaces and motor vehicles – increased enormously. Because ensuring good air quality was not the direct responsibility of local governments, they did not carry out more extensive activities in this area.

The consequence was the very poor air quality in most Polish cities.

4 Population equivalent

Another mistake was the fact that no effort was made to coordinate activities at the municipal level. Although, as noted earlier, the principle of subsidiarity brought significant benefits, its strict application led to a situation in which neighboring municipalities made many similar small-scale investments, limited in impact to their own areas (municipal landfills, wastewater treatment plants, composting plants, etc.). This made it impossible to achieve economies of scale by carrying out investments shared by multiple municipalities, which would have significantly reduced the unit cost of environmental protection.

1.2. Accession negotiation period

An important lesson from Poland's EU accession is the conclusion that the environmental negotiation process has nothing to do with the state of the environment in the candidate country or the problems it faces in its efforts to improve it. The subject of the negotiations is the process of the candidate state's adoption of the EU's environmental acquis, as well as the demonstration by its government that it will ensure compliance with the adopted standards in the future and make the investments needed.

Under this approach, representatives of an accession state cannot demand or negotiate amendments to European law. Neither can the argument be used that some Member States do not meet the requirements of EU environmental law; instead, they must convince the EU that their country will be able to cope with the organizational, administrative, technical, and financial efforts to ensure compliance with the requirements of EU legislation.[5]

Such expectations were quite clearly formulated by the EU side during the negotiations with Poland. The EU specified the following conditions for closing negotiations: first, the transposition of all EU environmental law, and second, the presentation by the Polish side of implementation programs for individual environmental directives. These programs had to take on board administrative aspects (the ability of the national environmental apparatus to implement and enforce a given legal act and to cooperate with EU institutions in this regard), technical aspects (the means of fulfilling the requirements of a legal standard) and financial aspects (the method and sources of financing the costs related to implementing the requirements of a given directive). In the course of negotiations, Poland also accepted two further principles:

- EU environmental standards could not be lowered for Poland,
- Transitional periods for the implementation of individual EU legislation were to be treated as exceptional solutions, used only in justified cases.

For smooth negotiations, it was important to create an adequate institutional base. It was established within the organizational structure of the Ministry of Environmental Protection, Natural Resources and Forestry (MEPNRF). One deputy Minister with the rank of undersecretary of state, who was also one of the 17 members of the Polish Negotiating Team, was responsible for its operations. Its activities were supported, primarily, by the staff of the Department

5 The exception is when the environmental standards in the candidate state are stricter than EU standards. In such a situation, the European Commission may exempt the country from adopting the EU standard.

of European Integration of the MEPNRF, which coordinated the Ministry's work on accession negotiations. In addition to preparing and approving draft negotiating positions in the environmental area, answering questions from the EU side, or preparing proposals for legal changes resulting from the need to transpose EU law, the Department's employees were also tasked with providing opinions on documents, strategies, draft negotiating positions, and legal acts concerning other negotiating areas, the content or scope of which could affect the way environmental protection was implemented in Poland. Polish experience shows that the following factors determined the efficiency of such a team:

- Employment of high-level experts, proficient in the formal and substantive law of the EU. The Department of European Integration was headed by Grażyna Niesyto, a long-time employee of the Representation of the Republic of Poland to the EU (and former employee of the Inspectorate for Environmental Protection). The Department also employed people who had previously completed internships at the European Commission,
- Assigning matters related to the negotiation process a priority status. This allowed quick responses from staff of other departments. This was all the more important because, very often, the EU directed formal and informal technical questions to Poland about particular directives and expected quick answers.
- The opportunity to obtain technical and expert support from external specialists, such as factual, technical, and scientific justification of Polish proposals. The work of the experts was financed by the PHARE pre-accession fund,[6] which made it possible to commission expert reports by both domestic and foreign specialists

Well-developed statistics were also an important support for Polish negotiators and experts. Environmental protection data have been collected and published in the form of statistical yearbooks by Statistics Poland since the 1970s. These have facilitated the assessment of trends in Poland, the estimation of investment needs, and the assessment of the cost of implementing EU requirements or reporting to the EU. While not all the statistics could be considered completely reliable – as they were not empirically verified – they were unchallenged by the EU during the negotiations.

Poland presented its negotiating position in October 1999, proposing transition periods for 14 directives. The EU addressed this proposal in December 1999, requesting that the legitimacy of all transition periods be reconsidered. For those legal acts for which implementation before the date of accession was impossible, the Polish side was requested to submit detailed implementation programs. The plans were to include statistical and economic data justifying the transition period, a detailed implementation schedule for each of the directives' requirements, and budgets including expected costs and financing sources.

6 Poland and Hungary: Assistance for Restructuring their Economies.

The exchange of positions between Poland and the EU continued over the next two years, during which the proposals and information contained in the implementation programs were made gradually more detailed. Negotiations were temporarily closed in October 2001. As a result of EU pressure, Poland withdrew from five transition periods; the EU ultimately accepted them for nine directives. Most of the adjustment periods were scheduled to last between three and five years, with the start of the period falling on the closing date of negotiations, i.e., October 2001, rather than the date of accession to the EU. The longest periods were used for the Urban Wastewater Treatment Directive (91/271/EEC): 10 years for the construction of sewage systems in agglomerations over 10,000 PE, and 8-to-13-year periods (depending on the size of the agglomeration) for the construction and modernization of wastewater treatment plants.

During the accession negotiations, the EU prioritized regulations on industrial activity and free movement of goods. The main concern of EU negotiators was that Polish companies' operating costs during the transition period should not be lower than those in other Member States due to weaker environmental standards, as this would breach the conditions of equal competition. It was much easier to negotiate concessions on the implementation of municipal infrastructure regulations, including the construction of sewage systems, wastewater treatment plants, landfills, and municipal waste treatment facilities.

Another area in which the EU did not accept adjustment periods was the horizontal regulations on environmental impact assessments and the socialization of the environmental process. The Union argued that the implementation of these regulations does not require financial outlays, but only institutional and organizational changes, and should, therefore, be completed before the closing date of the environmental negotiations.

The following conclusions can be drawn from the Polish negotiating experience in this area:

1. It is important to prepare well for the negotiation process. It is essential to know what investment needs are required to implement EU laws, potential sources of funding for these needs, the entities that are to perform the work, and the time required for implementation.

2. The accession period is a huge organizational and institutional effort. An initial audit of the country's environmental legislation showed that Polish regulations encompassed only 30% of European law standards. Hence, between 1999 and 2001, it was necessary to enact more than a dozen new acts and over 100 executive regulations. It is, therefore, important to appoint a team of legislators that will be able to draft the relevant legal acts and plan a fast legislative path to enable its smooth passage through parliament. It is also necessary to create a system for assessing all legal acts (not just those that concern environmental protection) for compliance with EU law.[7] Institutions responsible for environmental protection should also be reorganized to facilitate cooperation with institutions at the EU level.

7 Theoretically, the requirement for Polish regulations to comply with EU law standards was introduced in May 1991 and confirmed in March 1994 as a result of the adoption of Resolution of the Council of Ministers No. 16/94 (replaced in February 1997 by Resolution 13/97). In practice, these requirements applied only to the government administration and were not binding on the parliament, so many legislative drafts prepared by the government were amended at the stage of work in the Polish Parliament or Senate.

3 Accession negotiations require continuous commitment from representatives of the accession state and can be protracted. When starting official accession negotiations in March 1998, Poland assumed that they would be completed by 2000 (Committee for European Integration, 1997). In fact, negotiations took much longer, and membership was obtained four years after the planned date.

4 In the pre-accession period, priority should be given to directives on enterprises and the movement of goods (including the import and export of waste within the EU). In the case of Poland, the Union expected that rules prohibiting the provision of public environmental aid to private entities would be introduced as early as during the negotiations. If such activities had not been publicly financed in the pre-accession period, it can be presumed that many Polish companies would not have been able to bear their costs on their own and would have disappeared from the market.

5 Priority should also be given to horizontal regulations, the implementation of which does not require investment, but only procedural and organizational changes. Poland's experience indicates that the EU will not agree to adjustment periods here, recognizing that the regulations can be implemented at no cost.

6 It is beneficial to create a small expert team to support the negotiating team. In Poland, such a team was funded by EU pre-accession funds and consisted of three members: (1) a coordinator, an environmental expert; (2) an economist; (3) a specialist in the administrative and institutional area. The team should have a budget to order expert reports for specific legal acts to justify the negotiating position of the candidate state.

Among other lessons from the negotiations, it is important to point out the key role of a stable system of financing environmental protection. Between 1991 and 2000, Poland spent EUR 17 billion (about PLN 68 billion) on environmental investments, which is EUR 1.7 billion a year.[8] Estimates made during 1998–1999 indicated that the adjustment costs Poland was expected to incur between 2001 and 2015 ranged between EUR 20.7 billion and EUR 39 billion, depending on the estimate. In the implementation plans prepared for the individual directives, the cost was estimated at EUR 36.7 billion, so Poland was expected to spend at least EUR 2.45 billion on adjustment programs during this period. With the operation of the National Fund for Environmental Protection and Water Management, the financial gap between current expenses and projected needs was expected to be around EUR 750 million per year. However,

8 Although the euro was not mandatory currency in the EU for most of this period, for transparency, the values are presented in this currency, taking EUR 1 = USD 1.1 as an average conversion rate.

it was assumed that this gap would mainly occur in the period before Poland's membership and, in the post-accession period, the additional expenses would be covered by EU funds. In hindsight, this approach proved to be the right one. It was also accepted by the EU during the negotiations.

Another important lesson for Ukraine is related to a major mistake that Poland made during the preparation stage of the accession process. The politicians responsible for it recalled that, in the earlier processes of Community enlargement – in the 1980s when the Mediterranean countries joined the EU, or in the 1990s when Austria, Sweden and Finland joined – environmental issues did not play an important role during the negotiation process. They assumed that the same would be true for Poland. However, they failed to consider the fact that EEC environmental law was less developed in the 1980s, and yet the omission of environmental issues in the negotiation process with Greece, Spain or Portugal led to a situation described as an "implementation gap." These countries formally adopted the EU's environmental acquis but have been unable to actually comply with the orders and prohibitions introduced by these legal standards. In the course of the Community's enlargement to include the Scandinavian countries and Austria, it turned out that the environmental laws there were already in line with, or stricter than, EU requirements. However, when the talks were launched by the Luxembourg group,[9] EU treaty law already had provisions recognizing environmental protection as an official EU policy area (since 1993) and making it mandatory to integrate environmental protection into all EU sectoral strategies (since 1999).

The costs of adjusting to EU legal requirements in Poland could have been lower.

Poland also made several further mistakes that, if avoided, would have sped up the accession process and resulted in lower compliance costs under EU law.

Among other things, there was no awareness that environmental protection is a horizontal area and cannot be considered in isolation from other negotiating areas (municipal services, infrastructure, industry, agriculture, transportation development). Neither in the pre-accession period, nor even after accession, were the environmental constraints considered regarding the development of these areas. This was due to the lack of a requirement that activities and investments in these areas be evaluated for compliance with EU law. The do-no-harm approach to investments, i.e., the prohibition of public funding for investments that did not comply with EU requirements, was not defined or implemented.

9 Cyprus, Czech Republic, Estonia, Hungary, Poland, Slovenia.

Detailed identification of investment needs in the area of environmental protection also proved to be a problem. Although the first attempts were made in the late 1990s, detailed programs were only arranged during the ongoing negotiations within the process of creating implementation programs. There was also no attempt at a variant approach to implementing EU requirements, e.g., analyses of whether the cost of building sewage systems in rural areas with scattered development was significantly higher than supporting the construction of household wastewater treatment systems.

In hindsight, it is worth noting the last extremely important issue, which was the lack of a broad information and promotion campaign on environmental protection, the foundations and directions of EU environmental policy, and the importance of actions in this area for people's quality of life and safety. Such a campaign should be aimed both at citizens in general – because political support for most activities depends on their decisions – and, especially, at businesses and local decision makers, who largely bear the responsibility and expense of implementing the requirements of EU environmental regulations.

1.3. After accession

The example of Poland effectively demonstrates that the moment of closing negotiations or even joining the EU does not mean the end of European integration. After accession, the process of implementing those EU legal acts for which adjustment periods were obtained continued in Poland. The organizational and procedural changes necessary to implement these standards were taking place, adaptation investments were being made, and Poland reported annually to the European Commission on the progress of the work. The implementation of the legal standards, for which Poland obtained derogations during the negotiations, as stipulated in the Accession Treaty, was not completed until December 2015, more than a decade after joining the Community.

In addition, although the accession negotiations are about the acquis communautaire as it stands on a specific date before the start of the negotiations, the EU's legislative work is not frozen for that time. During the accession negotiations, new legislation is adopted in the EU and new goals are set, which become binding on the new country once it enters the Union. If the development of environmental policy is not monitored during this period, and adequate adaptation measures are not taken in relation to the requirements introduced, tensions and even conflict between the administration of the new Member State and the European Commission may arise after accession. This was precisely the case with the conflict over EU climate policy goals that arose between Poland and the European Commission.

Until the early 2000s, the EU did not have a regulation imposing significant greenhouse gas emission reductions on specific sectors. The situation changed in 2003 when Directive 2003/87/EC was adopted, establishing the European greenhouse gas emissions trading system (EU ETS). Its transposition and implementation were not part of the accession negotiations, so the potential consequences for Poland were not assessed, neither by the EU nor the Polish side. After Poland had already joined the EU, the Ministry of the Environment allocated[10] over 286 million allowances per year to entities covered by the EU ETS, primarily in the electricity sector (Ministry of the Environment, 2004). Since actual emissions from the sectors covered by the plan were significantly lower and did not exceed 220 Mt CO_2/year, the European Commission considered this to be unauthorized state aid and in March 2005 decided to reduce the number of allowances for Poland by almost 50 million Mt (to 239 Mt CO_2/year). The conflict erupted again when the European Commission proposed a change in the way emissions allowances would be allocated after 2012: an auction purchase instead of free allocation (Karaczun, 2018). Underlying these conflicts was the lack of awareness on the part of Polish politicians that European environmental and climate policy was developing dynamically, and new requirements were constantly being implemented, as well as the false belief that the huge costs incurred to adapt Poland into compliance with EU requirements meant that, in the coming years, the country would no longer have to allocate significant funds to environmental protection.

One other point is worth mentioning. After accession, Poland gained access to EU funds for investment in various development areas. However, the opportunity to use these measures requires the fulfillment of environmental criteria arising from current EU environmental standards, including environmental impact assessment, public consultation, and nature protection. This condition was difficult to accept for some Polish politicians, who considered these requirements an impediment to rapid economic growth, leading to delays in obtaining funds. This important lesson showed that, despite a much lower level of economic development than the EU average, the new Member State was subject to the same environmental rules and requirements as those that were much more developed. This was especially true of mandatory environmental impact assessments and the inclusion of public participation.

There is an important lesson for Ukraine to learn from this experience. Joining the EU does not mean the end of efforts to implement environmental requirements but may mean expanding the scope of work. Indeed, in addition to expenses related to the implementation of tasks in accordance with the Accession Treaty, it is necessary to finance investments resulting from newly adopted EU legislation. These tasks must be carried out in full compliance with the procedures applicable to Member States.

1.4. Conclusions and recommendations for Ukraine based on the Polish experience

Poland's experience only corresponds to Ukraine's current situation to some extent. Since 2004, the EU's environmental law and policy have evolved significantly, especially concerning climate protection. Many previous legal acts have been amended and their requirements tightened. In recent years, sustainability goals have been at the center of EU policy, largely due to citizens'

10 In the draft of the 1st National Emission Allowance Allocation Plan.

expectations. It is, therefore, to be expected that, compared to Poland's accession (or the later accession of Bulgaria, Romania, and Croatia), the area of the environment will be monitored with particular care in the EU–Ukraine accession negotiation process.

Nonetheless, Poland's experience allows us to draw some key conclusions. The first is the need for the Ukrainian side to prepare for the fact that accession negotiations in the environmental area will be difficult, arduous, and lengthy. The EU cannot accept a Member State whose companies would not meet EU standards and whose administration would not follow Community procedures. This would disrupt the rules of the Common Market and give Ukrainian entities an illegitimate competitive advantage. At the same time, as noted, the EU's environmental standards have increased significantly over the past two decades.

Ukraine should, therefore, appoint a negotiating team to cooperate with the EU regarding environmental protection. Ideally, the team should be headed by a person who coordinates the government's work in this area and, therefore, has real influence on decisions also made in other areas (e.g., one of the secretaries of state in the Ministry of Environmental Protection and Natural Resources or a specially-designated representative of the Prime Minister). Ukraine should direct interns to work at the European Commission (DG Environment, DG Climate Action) so that their knowledge and contacts can later be used in the work of the negotiating team. In addition, this work should be supported by a team of experts with a budget for commissioning external analyses (primarily domestically, but also in other Member States).

The greatest threat will be the temptation to accelerate the process of rebuilding the damaged infrastructure.

Second, actions taken in the pre-accession period, that is, before the start of membership negotiations, can facilitate and accelerate talks, but can also create significant barriers. The greatest threat will be the temptation to speed up the process of rebuilding damaged infrastructure and the temptation to carry out these activities in the simplest and least expensive way, i.e., at the cost of forgoing environmental protection installations. However, all new investments (including those restoring infrastructure destroyed by the Russians) should take into account the EU's environmental protection requirements. This will speed up negotiation talks and lay the foundation for the country's further development in this area.

Third, it is crucial to deliver a clear message to companies, local administrations and the public about the accession process in the area of environmental protection, such as the benefits it brings and the difficulties and risks that might be encountered. It can be expected that accession will be a very challenging and expensive task. The right message will enable a better understanding of this process, reducing the risk of reluctance and protests.

In this context, Ukraine should strengthen NGOs in the field of environmental protection. They are an ally in efforts to improve the environment and related investments. They communicate these needs more effectively than the government to the public, entrepreneurs, and representatives of other branches of public authorities. They also play a watchdog role, reducing the likelihood of mistakes and abuse that could hinder, or slow down, the accession process.

Next, it is important to remember that environmental protection is horizontal. EU standards in this area are implemented by entities in various economic sectors: municipal services, forestry, industry, agriculture, transportation, and services. This means that erroneous development decisions made in these sectors could hamper the implementation of EU environmental regulations. It is, therefore, reasonable to introduce the do-no-harm investment principle, that is, a ban on public funding of investments that do not comply with EU environmental requirements. This principle may be introduced by amending the law on environmental impact assessment already in force in Ukraine.

In doing so, Ukrainian policymakers should pay particular attention to the agri-food sector. The sector plays a large role in Ukraine's economy, and, in recent years, the EU has introduced new, far reaching requirements here. They involve the following: reducing the use of pesticides and fertilizers, increasing animal welfare, maintaining agricultural land in good agricultural and environmental conditions, protecting water from agricultural pollution, and reducing antibiotics used in animal husbandry.

Moreover, Ukraine should consider adopting the principle of subsidiarity in the area of environmental protection, that is, transferring some responsibilities and competencies to lower (local) levels of public administration. Currently, environmental decisions are issued in a centralized manner by the Ukrainian Ministry of Environmental Protection and Natural Resources and its structures. With hundreds, or even thousands, of necessary adaptation investments and changes to existing environmental use permits (with the changes needed to bring the permits into compliance with EU law), the existing environmental management structure may prove inefficient from the perspective of finalizing this work on time. It is also difficult to imagine that the central government will be able to efficiently coordinate the implementation of all the adjustment investments.

It is essential to ensure adequate access to information about the state of the environment.

In addition, it is essential to ensure adequate access to information on the condition of the environment, investment needs in this area and existing environmental infrastructure. This knowledge will be essential to prepare sound adjustment programs. Currently, the key role in monitoring the state of the environment is played in Ukraine by the State Environmental Inspectorate of Ukraine, but the scope of the analyses carried out seems inadequate and unsuited to the needs of the EU integration process. Work in this area, based on EU reference methods, should be carried out, primarily, by Ukrainian experts (e.g., employees of universities and scientific institutions) and assistance from external experts should play a supporting role in this process.

Furthermore, there is a need to create a system of financing the investments through which the requirements of EU environmental law will be implemented. It is desirable to use off-budget institutional structures that would have a reliable and stable source of income over the next 10–15 years. Ukraine's investment needs will certainly not be lower than in Poland (i.e., at least EUR 2 billion per year), and given the changes that have taken place in EU environmental legislation over the past 20 years, they will probably be greater. The current system, based on declining[11] budget allocations, donor funds, and assistance from international programs, will not provide sufficient financing for necessary adaptation investments. The Ukrainian government should accept that most of the funds for implementing the physical requirements of EU regulations will have to be covered from Ukraine's own pocket.

Given the above, Ukraine should already be in talks with the governments of the creditor countries on the ecological conversion of part of the debt. Even if this will be for a relatively small portion of the foreign debt, if properly managed, the institution holding these funds can provide solutions to selected significant environmental problems, including through the transfer of modern and innovative environmental technologies to Ukraine.

Finally, it is desirable to coordinate investment efforts to take advantage of economies of scale. The idea is that environmental protection installations should be built on an economically efficient scale (for example, the waste system should cover about 200,000–250,000 people). The role of a regulator in this regard should be played by the Ministry of Environmental Protection and Natural Resources of Ukraine, overseeing local and regional environmental protection plans and investment programs for their implementation.

References

Committee for European Integration. (1997). *National Integration Strategy.*

Ministry of the Environment. (2004). *1st National Emission Allowance Allocation Plan.*

Karaczun, Z.M. (2018). The evolution of the sustainable development concept in Poland, as exemplified by climate policy. *Papers on Global Change*, 25, 11–22.

Karaczun, Z.M., Kassenberg, A. (2019). Environmental transformation in CEE countries. In: Gorzelak, G. (ed.), *Social and Economic Development in Central and Eastern Europe. Stability and Changes after 1990* (pp. 267–311). Routledge. Taylor and Francis Group.

Radziejowski, J., Niesyto, G., Jeziorski, J. (2002). *Integracja europejska a ochrona środowiska.* Rozwój SGGW Foundation.

11 According to projections, there will be a year-on-year decrease in budget subsidies to the Ministry of Environment and Natural Resources in 2024.

Contents

WiseEuropa

MODERN TRANSPORT INFRASTRUCTURE FOR UKRAINE

Planning and building Ukraine's future transportation system to maximize development opportunities after the war?

Patryk Wild, Maciej Bukowski

Summary

- This report describes European policy in the field of transport and infrastructure, i.e., the creation of a single Community transport market, the construction of a unified transport infrastructure within the TENt network, and the emission reduction climate goals to be pursued by the current European transport policy.

- The second part describes Poland's experience with the reconstruction of transport infrastructure after its EU accession in terms of the road network, rail transport system, aviation infrastructure, and intermodal transport and urban mobility. These experiences include both unequivocally positive elements concerning, for example, the modernization of the road network or airport network, and modernization activities concerning rail transport or intermodal transport, which were implemented with much poorer results than in the road sector. In each of the cases described, the main successes are highlighted, as well as the mistakes or challenges associated with the modernization activities carried out.

  In particular, successes were achieved in those areas where a multi-year action plan was prepared in advance with a target state, planned to be achieved, and the organizational and legal solutions used were prepared (vide, modernization of the road network), and the tasks carried out were accompanied by strong public pressure. Where the strategic objectives of modernization and the target model of system operation were not precisely defined, and EU funds were used to solve ad hoc needs, the achieved results turned out to be much worse (vide modernization of railways).

- The third part of the report describes the opportunities and threats related to Ukraine's future accession to the EU and the use of EU membership to modernize Ukraine's infrastructure. Recommendations for Ukraine on the formation of the TENt network in Ukraine are presented, including recommendations on the desired target shape of TENt corridors in Ukraine and potential indicators for the length of linear network elements within Ukraine and the number of point infrastructure elements based on indicators for the TENt network within the EU.

Subsequently, specific guidelines are formulated for the modernization of road infrastructure, the railway transport system, inland waterways, intermodal transport and urban transport systems. The development of the abovementioned recommendations is based on the current EU transport policy, Polish modernization experience, and the special conditions existing in Ukraine. A common feature of all recommendations is to have adapted to local conditions, which is a target vision of the national transport system and its subsystems, translated into appropriate regulations and the implementation of long-term modernization programs and the creation of appropriate institutions responsible for their implementation.

1. Introduction

During its 20 years of EU membership, Poland has made a significant modernization effort to rebuild the transportation infrastructure system in its area. The experience has been generally positive, although several mistakes and omissions have not been avoided. It can be a source of useful lessons for other countries wishing to follow a similar infrastructural path. Ukraine may be such a country, even though it is facing a modernization process under significantly different external and internal conditions to those of Poland, which began modernizing its infrastructure after joining the EU in 2004. Awareness of these differences is essential to properly benefit from the Polish experience. The present study was written during the war. Its future, outcome and even losses already incurred are, therefore, unknown at this time. For the sake of the reader's attention, and due to our intention to present as comprehensive a vision of infrastructure development in Ukraine as possible, we have made the following assumptions:

- Ukraine will win the war with Russia and regain its territory. At the same time, the peace treaty will not be concluded and Russia will not pay reparations or recognize the militarily determined status quo. In view of the above, Russia will be hostile to Ukraine and to NATO, while sanctions on Russia are likely to be maintained and the country will remain isolated in relation to Europe. Consequently, its border will stay largely closed for trade and human flow. At the same time, winning the war with Russia will put Ukraine and Moldova on the path to NATO and EU membership as a matter of urgency.

- Despite the lack of territorial losses, Ukraine will suffer population losses as a result of the permanent emigration of some of its people who left the country after the war broke out. In 2030, the country will have 32–35 million citizens and an unfavorable demographic structure. To compete for people and capital, Ukraine will have to radically modernize the state, including significantly improving public services and the country's economic system, with part of the reforms targeting the transport sector and infrastructure investments. Ukraine's GDP, thanks to institutional reforms and EU membership, will grow at a rate of 4–5% per year.

- Ukraine will be severely damaged after the war but will receive international aid related to post-war reconstruction and state modernization at a higher level than Poland was granted from the EU during 2007–2021. This will enable Ukraine to implement ambitious infrastructure and development strategies.

- Ukraine's victory in the war will reinforce the trend of countries emerging from the former USSR republics becoming independent of Russia, both European-oriented towards the EU and Asian-oriented towards Turkey or China. In particular, a change in Belarus' orientation (from pro-Russian to pro-European) and, in the longer term, its future accession to the EU, following the example of Ukraine, is possible.

The rest of the text is organized into several main threads. First, we present the desired shape of the future transport network in Ukraine and how it can fit into the European TEN-T system. Second, we look at different areas of transport infrastructure focusing on road, rail, air, intermodal, and urban transport. Each time, we present the European context, Poland's experience of EU membership, and the lessons it has brought to Ukraine. The entire document concludes with a short framework of recommendations summarizing the issues presented in the body of the study.

2. European transport policy and lessons for Ukraine

2.1. Trans-European transport system in the EU

The European Union implements its transport policy through the development of a common trans-European transport network (TEN-T). The goal of the TEN-T is to integrate and modernize Europe's most important transportation infrastructure in the form of roads, railways, airports and seaports, and other infrastructure, linking different EU regions. Nine core network corridors (e.g., Baltic–Adriatic, North Sea–Baltic, or Rhine–Danube) have been established, which, by resolving bottlenecks arising both within and between countries, are designed to streamline network construction and speed up work on specific projects of European importance. The entire network is intended to ultimately improve cooperation between different modes of transport so that it contributes more effectively to the economic development of member states and the economic integration of the EU as a whole. Its shape is determined through negotiations between member states and the European Commission, which allows individual countries to integrate their own investment priorities into broader, pan-European plans, as long as these show sufficient cross-border value to serve the objectives of the TEN-T. This is all the more advantageous because projects included in the network are financially supported by the European Commission, including through the Structural Funds, the Connecting Europe Facility (CEF), and financial institutions such as the European Investment Bank.

It should be noted that the EU's transport policy implemented through the TEN-T network is changing over time, with the pace of change accelerating in the last decade or so. It was first established in 1996 and remained, generally, unchanged until 2004. At the time, it was first revised to include new member states, also Poland. However, after this revision, the share of roads and railways covered by the network in Central Europe was still relatively small compared to other EU countries. No new investments in railway construction were planned in Poland at that time. Only the second revision of the TEN-T network, made in December 2013 and valid for another decade, improved the density of the CEE network by supplementing the core network with a comprehensive one. For example, in Poland at that time, the routes of newly planned high-speed rail lines were considered for the first time, and it was ensured that the plans for the TEN-T network became consistent with the planned expansion of Poland's road and rail network. As far as the road network was concerned, the core and comprehensive network, basically, overlapped with the Council of Ministers' regulation on the network of expressways and highways. It made it possible to co-finance the aforementioned investment with EU funds. In 2023, negotiators in the European Parliament and the European Council agreed on updated TEN-T guidelines across the EU, focusing on accelerating the implementation of major transportation projects by 2030. The goal is to complete the Trans-European Core Network by the end of 2030, and the Comprehensive Network by the end of 2050 with an intermediate date of 2040 for a number of projects. The emphasis was on railways and intermodal transport, especially electrified railways, standard track gauges, and a unified traffic management system. In addition, the new guidelines have reduced transport infrastructure projects with Russia and Belarus, while strengthening connections with Ukraine and Moldova.

2.2. The desired shape of the TEN-T network on Ukraine territory

The current network of EU corridors includes 56,000 km of railways, 40,000 km of roads, and nearly 13,000 km of waterways, as well as 130 sea and inland ports, 208 airports, and almost 330 intermodal terminals. Ukrainian infrastructure is not currently included in the TEN-T development plans, but it can be assumed that in the future, in the event of the country's accession to the EU, this will change. Based on past practice, the scope of this inclusion will be appropriate to its population, area, and location. The accession of Ukraine (604,000 km and an estimated population of 38 million) and Moldova (34,000 km, population of 3.5 million) increases the EU's area (4.233 million km2) by 15% and population (447 million inhabitants) by 9%, while if Belarus (208,000 km, 9.5 million) joined the EU, the total increase in EU population would be 50 million (11%) and its area would increase by 856,000 km (20%). The EU should, therefore, respond to the accession of Ukraine and Moldova by significantly lengthening the network of its corridors and correspondingly increasing the number of nodal infrastructure facilities to serve them in proportion to the length of the network and the amount of nodal infrastructure in other countries in the Community. Based on the population and area data presented, it can be assumed that such a revision would take into account the expansion of the European network within Ukraine by about 3,000–4,500 km of expressways, 4,000–6,500 km of railways, and 1,000–1,500 km of inland waterways, as well as up to 15 sea and inland ports, up to 15 airports and 24–38 intermodal transport hubs.

The current proposal to revise the TEN-T corridors is valuable as a directional initiative to include non-EU and EFTA countries in the transport corridor network. However, it should not be taken as a proposal for the final shape of this network after Ukraine's admission to the EU as it does not address some of the needs related to such a situation. The major geopolitical and economic change that will be the accession of Ukraine (and Moldova) to the EU should result in significant infrastructural changes—including adjustment of the network of European TEN-T corridors—so that transport and energy infrastructure meets the needs of the economic integration of the region and its constituent countries, as well as the needs related to the defense capability of the Community. The current shape of the network is not satisfactory and, as such, should be supplemented in the event of Ukraine's EU membership. Anticipating this situation, Ukraine's infrastructure strategies must ensure that the network of transport links within the country is planned in a way that provides direct connections between Kyiv and the capitals and major metropolises of neighboring large EU countries (Poland and Romania). This means that the network must be connected to the infrastructure currently in place, under construction, or planned in them, which will allow for finding allies to route the corridors in a developmentally beneficial way for Ukraine and its neighbors. At the national level, it is important that the network covers all major urban and industrial centers in Ukraine (Kyiv, Dnepr, Kryvyi Rih, Kharkiv, Donetsk, and Odessa) and port cities on the Black Sea and Azov Sea (Mykolaiv, Kherson, and Mariupol) and improves internal communications between them. In terms of nodal infrastructure (ports, airports, road-rail, and rail-rail terminals), it will be crucial to ensure the possibility of building a convenient EU-integrated transport system, including, in particular, the construction of an intermodal system, transshipment infrastructure at the junction of rail systems of various gauges, etc.

At the same time, these plans should include the option of extending the network to Belarus in the future (in a situation of its democratization and inclusion in the EU), which would support not only the security of Ukraine, but also its development opportunities through a real increase in the effectiveness of the system of transport links on both the east–west (E–W) and north–south (N–S) axes. As it prepares for membership, Ukraine must, therefore, ensure that the next revision of the TEN-T network includes all, or most, of the country's infrastructure investments planned for the next 2–3 decades in the areas of expressways, the modernization and construction of new railways and inland waterways, and infrastructure of a nodal nature (ports, airports, intermodal transport hubs). The development and incorporation of these plans will result in quick access to EU funds for these investments in the future—after Ukraine's accession to the EU.

A good benchmark for Ukraine in terms of infrastructure is Poland, which—among Central European countries—has relatively made the best use of its accession to the EU as an opportunity to improve its infrastructure in a way that meets its own development and strategic needs. With a population of 38 million and an area of 312,000 square kilometers, Poland is building a system of 8,200 kilometers of highways and expressways that will be ready around 2035, after about 30 years of construction. As for its railways, Poland plans to build approximately 2,000 kilometers of new railways by 2035–2040 (12–17 years), mostly in the high-speed line standard. The planned rate of construction will be around 120–160 km of new lines per year and is similar to that achieved by Spain, which built a system of 4,000 km of new high-speed rail lines within 34 years (1998–2022), amounting to approximately 120 km of new rail lines per year (under more difficult terrain conditions than Poland or Ukraine). After the war, it can be expected that the population of Ukraine will be smaller than that of Poland. The level of GDP in the foreseeable future will be significantly lower than Poland's. However, due to different spatial conditions, including lower population and building density, Ukraine is likely to be able to upgrade more roads and railways to the target standard than Poland. This will entail lower investment costs, an easier administrative procedure, and perhaps faster execution of the investment. Ukraine will also likely be able to count on additional international funds (over and above standard EU funds) related to post-war reconstruction compared to standard EU funds.

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of Ukraine
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that of Poland.*

Taking into account the above conditions, it can be assumed that the length of the network of expressways and highways that Ukraine can realistically afford to build and maintain by 2050 is in the range of 5,000–7,000 kilometers. Such a network would mean that the rate of construction of new A+S class roads would be at a level similar to those of Poland, which seems a realistic assumption, although perhaps somewhat optimistic given the scale of other construction needs during the country's postwar reconstruction. Such a length of network is sufficient for the creation of two corridors in the W–E layout and several corridors or connectors in the N–S layout allowing for the correct linking of Ukraine's major urban centers and the creation of a network that allows for the proper service of the country and international links. The modernization and expansion of the rail network, including the construction of new 1435mm gauge lines, should be considered in a similar way. As in the case of highways and expressways, its main goal should be to integrate the country's main centers into the EU rail network by connecting them to each other and to the main centers of neighboring EU countries, primarily Poland and Romania. For economic reasons (freight), it will be crucial to create EU railway connections of normal-gauge standard, connecting the most important Ukraine seaports with other countries of the Community (transit connections passing through Ukrainian territories, e.g., Poland–Ukraine–Romania–Moldova and in the future Romania–Ukraine–Belarus–Lithuania–Latvia). Meeting these goals, the system of the new 1435mm gauge railways would have a target length of 3,800–4,000 kilometers within Ukraine and an additional 200 kilometers each in Moldova and Romania (in corridors connecting Ukraine's centers, e.g., Odessa–Chisinau–Lviv).

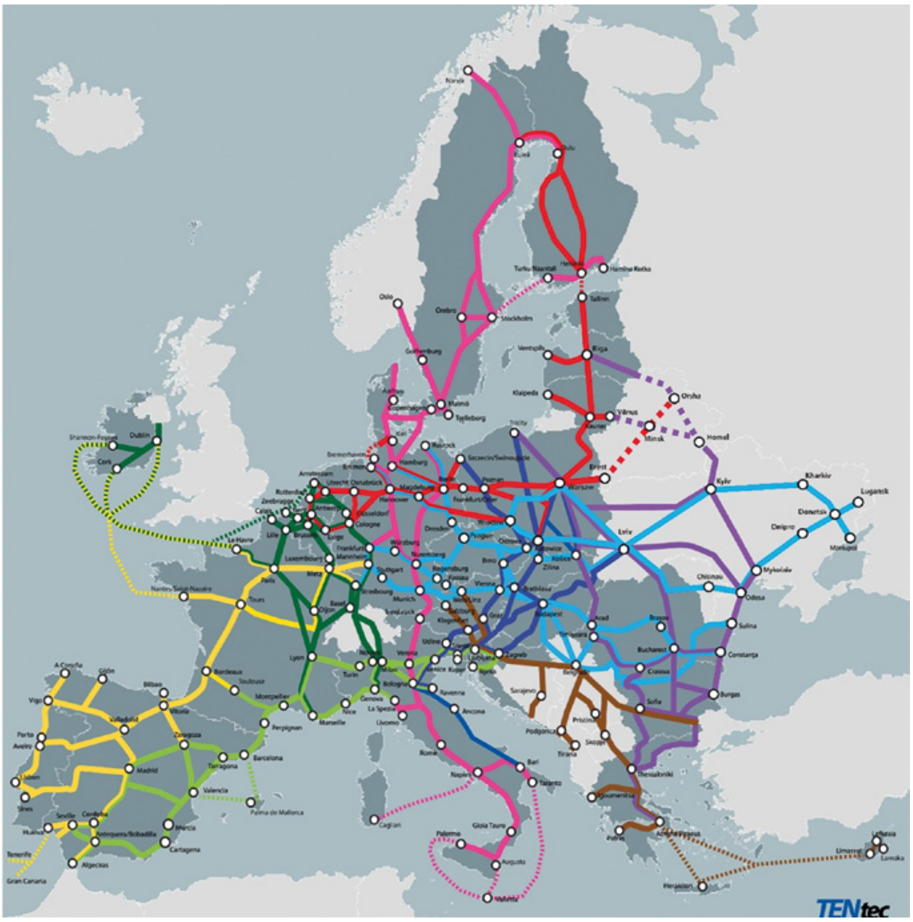
The construction of the modern linear transportation infrastructure will put a serious strain on the Ukrainian state budget. Although in most areas, Ukraine has good terrain conditions for the construction of transportation infrastructure, the unit cost of building a road to highway or expressway standards is around EUR 7–10 million. The construction of a kilometer of high-speed main rail line in easy terrain will incur costs of a similar order of magnitude, which can increase very significantly if there are terrain difficulties. In the case of the construction of a network of 7,000 km of expressways and about 4,000 km of new HSR lines, the value of the investment program will be EUR 100–150 billion (over about 25–30 years for the current price level). Therefore, it is important that as much of the new linear infrastructure as possible is built within the EU corridor network, with co-financing from the EU budget. This requires planning the core network of the TEN-T corridors in such a way that combines, to the greatest possible extent, the transport needs of European integration with the internal communication needs of Ukraine. In the case of the road network, around 60%–80% of the length of the Ukrainian highway network could be built within the EU core network corridors, while in the case of railways, the share built in the new corridors should be even higher—reaching 100%.

Below (Figure 1) we present the concept of modifying the TEN-T corridor proposal taking into account the abovementioned development conditions. The proposal modifies existing plans with:

- Kyiv's direct connections to Warsaw and Bucharest on individual corridors;
- the extension of the Baltic–Blacke–AEG corridor through Belarus to Lithuania and Latvia;
- the extension of the east–west corridor from Odessa through Dnipro to the Donetsk Basin.

In particular, we propose that for the east–west connection, instead of the North Sea–Baltic corridor, a modified Rhine–Danube corridor should be used, renamed the "Rhine–Black Sea" and, in the Ukrainian section, end in Mariupol. This corridor would have to be modified by extending it from Prague to Wrocław and on via Łódź–Warsaw–Lublin–Lviv–Kiev–Kharkiv–Donetsk to Mariupol, and via Katowice–Kraków–Rzeszów–Lviv–Chernivtsi–Yassy–Chisinau and Odessa-Mykolaiv-Dnipro-Donetsk to Lugansk. In turn, the Baltic–Black–AEG corridor should, in our opinion, be extended from Constanta to Odessa and on to Kyiv (and in the future via Gomel–Minsk to Vilnius and via Bobruisk-Dyneburg to Riga) and, at the same time, extended from Lviv to Lublin and Warsaw (and on to Gdansk). In the future, the North Sea–Baltic Sea corridor could end at the border with the Russian Federation between Orsha and Smolensk. Such an arrangement of corridors would be more logical in terms of naming and the layout of connections (it would connect the capitals of neighboring countries), and attractive not only to Ukraine but also to other EU countries, as it would allow the rail and road investments being prepared in those countries to be included in its course. For example, the Rhine–Black Sea corridor would overlap in the Czech Republic with the D11/R11 road (from Jaromierz to the Polish border), while in Poland, with the S3 and S5 roads from Bolków to Wrocław, and the A 50 (from A2 to S17) and S17 (on the Lublin-Hrebenne section) as well as the Prague-Wrocław-Warsaw and Lublin (Trawniki)–Zamośc–Hrebenne railway lines. However, the Baltic–Black–AEG corridor in Romania would fit in with plans to build expressways from Constanta and Bucharest to the Ukrainian border. Detailed infrastructure proposals should also include newly designed railways, expressways, and intermodal terminals, as well as more airports and seaports than included in the EC's TEN-T revision proposal.

Figure 1: Modified proposal for the revision of the TEN-T network



3. Road transport

3.1. EU conditions

The main goal is to reduce greenhouse gas emissions by 90% by 2050.

The EU's climate policy in the transport sector focuses on reducing greenhouse gas emissions to accelerate the decarbonization of the EU economy, with approximately one-quarter of emissions coming from the transport sector. The main goal is to reduce the sector's greenhouse gas emissions by 90% from 1990 levels by 2050 and, thus significantly reduce its share of the EU's overall carbon footprint. To achieve this, with a focus on shifting from road to rail and water transport, the EU promotes electric and alternative-fuel vehicles, supports improvements in public transportation andinvests in sustainable infrastructure. In addition, it imposes stringent emission standards for vehicles and fuels, promotes research and development of green transportation technologies, and implements measures such as bringing transportation under a carbon trading scheme to encourage low-carbon solutions. This is to be achieved by the expansion of charging infrastructure, which is expected—by providing an adequate level of accessibility for the average road user— to encourage consumers to shift demand from combustion-engine vehicles to electric ones. At the same time, the EU—as part of the Fit for 55 package—envisions an end to the sale of new gasoline and diesel cars and vans by 2035.

At the same time, the community promotes—including through tax reliefs and subsidies—so-called zero-emission mobility in densely populated locations, such as urban areas; this not only includes changing the structure of the car fleet, but also the spread of electric buses and bicycles or the creation of clean transport zones, in which vehicles must meet increasingly stringent emission standards. Support for low-emission transportation is also evident in industrial policy, including in the area of research and development. EU supports research into energy storage technologies or energy management in transportation systems. EU policy also includes support for the development of both freight and high-speed passenger railways taking over passengers from the road and short-haul air travel, and support for alternative (renewable) fuels for air and sea transport.

3.2. Polish experience

When joining the EU, Poland had (from 1993) a regulation on the network of highways and expressways, which defined the future road network. However, despite the establishment of the Highway Construction Agency in 1995, investments have not been made. In 1997, the aforementioned agency granted three concessions for the construction and operation of 465 kilometers of highway. However, the long process of contract negotiations meant that the construction of these roads was already completed during Poland's EU membership and could be financed with EU funds. After it acceded to the EU, Poland no longer continued road investments in the concession model, which still arouses serious controversy even though it only concerns 10% of the national road network of this type. In Poland, between 1998 and 2001, the average annual rate of the construction of highways and expressways was 38 km, so the construction of the planned network of 6500 km of roads (taking into account the then-existing sections) would take about 160 years. In 2002, the Government of the Republic of Poland adopted the Plan for the Construction of National Roads and Highways. In the same year, in place of two institutions dealing with the management of national roads and the construction of highways, a single body was established to handle all matters related to the construction and maintenance of road infrastructure of national importance, i.e., the General Directorate of National Roads and Highways. In 2003, special legislation was introduced that allowed faster expropriation procedures for road infrastructure construction. When Poland became a member of the EU in 2004, it already had the appropriate legal tools, and organizational structure, as well as the approved network plans necessary to begin a wide range of infrastructure works related to the construction of the road network—once EU funding was obtained.

Currently (December 2023), the expressway network is nearly 4,900 km long. Between 2004 and 2022, more than 4,100 km of such roads were built in Poland, giving an average annual construction rate of 230 km. Maintaining such a pace of road construction, the entire highway network with a currently planned length of 8,177 km will be completed by around 2036—more than three decades since the actual start of the country's road network expansion process and more than four decades since the beginning of the bureaucratic process. It is already an undoubted modernization success story. However, mistakes were made involving an incorrect order of investments resulting from prioritizing building sections that were easier and cheaper to design, rather than those that had the highest economic rate of return. As a result, roads with the highest traffic volume, but that were also the most complex (e.g., bypasses of major cities and road sections near them), were built later than sections between cities. This brought complications, such as traffic jams in cities caused by rerouting the traffic to their centers from intercity road sections converted to highway standards. Mistakes were also made in the contracting of investments, which resulted in much abuse against subcontractors during the initial period (e.g., not paying them for work done), which was resolved by appropriate provisions in the contracts only after many abuses occurred.

3.3. Conclusions for Ukraine

Based on Poland's experience, Ukraine should prepare a targeted plan for the expressway and highway network for the next three decades and enact it in a relevant legal act (Law or Regulation). At the same time, when developing a road network plan, a plan should be included for the expansion of infrastructure accompanying the road network, such as intermodal nodes in the vicinity of the road and rail network. Regulations and legal tools should also be introduced regulations to enable the smooth implementation of road investment projects, even before joining the EU. Also worth copying from Poland is the institutional experience (a dedicated, independent road construction agency based on two "legs"—national and regional—working in a way that is transparent and understandable to all stakeholders involved (tenders, open information policy, and reporting). A key aspect of road construction will be environmental regulations, which must be fully compliant with EU law from the outset so that the most urgent (including ongoing) investments are already environmentally compliant with EU law prior to Ukraine's formal EU membership. In particular, protected areas (Natura 2000 networks and reserves and national parks) should be designated and infrastructure development should be planned so that the disturbance of these areas by new investments is minimized.

At the technical level, it is important to plan a framework investment implementation schedule so that the most justified investments are implemented first (e.g., infrastructure needed for military supplies or exports, roads serving the greatest vehicle traffic, such as bypasses of the largest cities and suburban sections in the vicinity of the largest centers of Ukraine, and roads between the country's largest urban centers). It is also crucial to plan individual tasks in a way that makes optimal use of the potential of construction companies avoiding periods when a high number of orders are accumulated and when there is a shortage of orders. For smooth implementation, at the legal and institutional level it is extremely important to prepare, early, a system of financing the above investments (EU funds, or others related to post-war reconstruction) and, along with it, a payment system for the use of roads—at least as far as expressways are concerned (which is a requirement of the EC for expressways).

When building new road infrastructure in slightly different external conditions to those in Poland, from the outset, Ukraine should plan in a way that will enable the use of breakthrough 21st-century technologies in road traffic and, in particular, solutions related to the electrification of road transport, allowing vehicles to be recharged while driving, truck parking areas sized to handle much longer vehicles in intermodal transport permitted by exceptions to EU regulations, engineering structures with increased strength to allow the use of heavier vehicles in intermodal transport, and potential additional installations to enable/support the implementation of truck autonomous transport in highway traffic. In turn, from the angle of the cost of the entire project, the assumption of mass prefabrication of repetitive elements (e.g., overpasses and animal crossings) is very important.

Electrification of road transport in Ukraine

The electro-mobility revolution has been going on for a decade and its causes are related to the development of battery technology and the advantages of the electric motor over the internal combustion engine. The development of electromobility is also supported by EU climate policy and its regulations will significantly accelerate the electrification of vehicles on the road in the future and worsen the economic performance of emission-intensive transportation systems. The most difficult electric road transportation challenge to solve is long-distance trucking. The weight of the batteries for a heavy truck (e.g., a tractor-trailer) is high enough to reduce its cargo-carrying capacity and, at the same time, the advantages of the electric engine (e.g., braking energy recovery) are relatively limited here. Despite this, most analyst reports also indicate that battery solutions will be the future of trucking.

Since Ukraine faces the challenge of constructing an entire highway infrastructure, it needs to consider the decision to build dynamic electric power systems for road trucking, such as charging electric trucks on the move from a catenary placed above the roadway as in the case of trolleybus systems, in the operation of which Ukraine has very rich experience. Such solutions implemented during the construction of new infrastructure will be significantly cheaper than their implementation on infrastructure already built and, besides, may provide an argument for placing production of such vehicles or infrastructure components in Ukraine. At the same time, if autonomous transport is introduced, the solutions in question will significantly improve shipment transit times due to charging on the move with no need for breaks while driving (rest breaks are mandatory for drivers).

The electrification of transportation is an industrial opportunity. The occurrence of lithium deposits in Ukraine is an argument in favor of supporting battery technologies in transportation and building competitive advantages based on them in production. Key to the popularization of electric transportation technology is the adequate availability of charging infrastructure for electric cars in cities and along major roads, as well as the construction of additional zero-emission energy capacity (based on RES or nuclear power) and energy storage for the transportation system. Providing support for the listed activities should be a main administration task. For Ukraine, the opportunity is, at least, in the production of batteries, engines, vehicle charging or powering infrastructure, or the vehicles themselves. An appropriate transportation policy can be a tool to support industrial policy. However, as the electromobility revolution has been underway for a decade, key centers of competence and production of this technology have already been established. Nevertheless, Ukraine, with its experience in the operation of road electric vehicles in urban transport (trolleybuses) and its significant lithium deposits, has a chance to take a prominent place in the chain of competence and production of technology for this type of transport. Supporting its implementation makes deep economic sense here.

Source: Authors' compilation

4. Railway transport

4.1. Polish experience

Unlike the road network, the modernization of Poland's rail system after joining the EU can hardly be considered an unequivocal success. In the case of the rail network in Poland, no real expansion plan was prepared until 2019 and the money was spent on modernizing the existing network and ongoing purchases of rolling stock. Although the documents adopted at the government level included a postulate for the construction of new railway lines and even a program for the launch of high-speed rail, which was adopted in 2009, none of these documents guaranteed funds for the implementation of such tasks, nor did they create an organizational and operational framework. Decisions concerning the modernization of the rail network were actually entrusted to the rail infrastructure manager—the PKP PLK company—which was separated in 2001 from the state-owned PKP enterprise under the Act on the restructuring and commercialization of that entity. This company developed modernization proposals, which were then approved by the Government as the disposer of EU funds. Thus, organizationally flawed, the issue of shaping state transportation policy was delegated to the rail infrastructure contractor. PKP PLK had no experience in building new lines and, having a serious backlog of infrastructure maintenance and no set target for the final shape of the network, sought to use the entire pool of EU funds to modernize the existing network as it was, regardless of the costs. In this way, investments replaced maintenance works, and European funds were not used to build new infrastructure elements and significantly improve the railway system, but to improve the quality of the existing infrastructure, although the shape of the railway infrastructure in Poland does not meet the transport needs of the country within its current borders.

Each of the major upgrades to the existing network—while construction was underway—significantly reduced the attractiveness of rail as a mode of transportation, increasing travel times or making travel by train impossible. At the same time, work on the existing network did not, typically, lead to significant improvements to travel times compared to the state before the upgrade. Simultaneously, the state was building a network of expressways and highways, which dramatically improved the attractiveness of road transport compared to rail, causing an outflow of passengers and transported goods. As a result, despite sizable expenditures on rail infrastructure, there was a decline in the weight of freight transported between 2005 and 2019, from 269.5 million tons in 2005 to 233.7 million tons in 2019. As the overall weight of freight increased during this period, the railway's share of freight between 2005 and 2019 declined from 18.9% of freight weight to 10.5% and from 21.4% of freight work (measured in ton-kilometers) to 11.4%. In practice, in addition to intermodal transport, railways have only handled those freight

The modernization works on the existing network usually did not lead to a significant improvement in travel times.

transports whose transportation cannot be economically substituted by trucking. However, the volume and weight of containers transported using intermodal transport increased significantly (data for 2012–2021 shows an increase in the number of TEUs from 1.047 million TEUs to 2.920 million TEUs and the weight of shipments from 8 million tons to 26.5 million tons). However, neither the state freight carrier (PKP Cargo) nor any other carrier attempted to build a nationwide intermodal transport system capable of competing with road trucking, despite the availability of EU funds for the expansion of infrastructure a nd rolling stock for intermodal transport.

In passenger transportation, the situation looked better due to rolling stock purchases and the natural advantage of rail in commuting to city centers, compared to road transportation prone to congestion. The aesthetics and comfort of stations also improved, which helped the image of the railways and increased passenger numbers. At the same time, no offer was created in rail transportation that would represent a qualitative breakthrough comparable to the construction of highways, which was due to the lack of investment in new rail lines. In fact, the only new sections of the line were routed to the airport, as dead-end lines, in most cases. As a result, these lines have very low economic efficiency and serve a marginal number of passengers—and some of the newly built lines have ceased to be served at all. In passenger transportation, the Polish railway, therefore, did not achieve the planned growth. According to the "Masterplan for Rail Transportation" of 2008, in the implemented development scenario, the projections were to obtain about 400 million passengers in 2019. Meanwhile, the results for 2019 were 335 million passengers (vs. 258 million in 2005). A noticeable improvement in the number of passenger services was recorded in long-distance intercity services and in some regional services, but only in those voivodeships that, in addition to purchasing modern rolling stock, prepared attractive, dense train schedules—particularly where the infrastructure was in the right shape to suit the settlement layout. The latter was helped by the creation of an attractive regional and/or agglomeration transport offer, sometimes resulting in spectacular increases in passenger numbers in some regions of Poland (Lower Silesia by 143%—especially in urban and regional agglomeration transport). However, this success was very unevenly distributed across the country, limiting itself to certain voivodeships with adequate rail infrastructure and strong metropolitan centers.

4.2. Conclusions for Ukraine

At the strategic layer, the most important point in the plans for changes to the rail infrastructure must be the improvement of its technical condition and capacity and speed parameters, including the removal of local bottlenecks. At the same time, this will require completing missing elements of the rail network in places where, for historical reasons, it has an incorrect shape, including the electrification of some sections of the rail network and improving their integration with the railway systems of EU countries involving the construction of double-gauge sections in the cross-border area and improving connections with broad-gauge sections in Poland—in particular, with the LHS line. The infrastructure should also be technologically prepared for the easy mechanical change of railway gauge to standard size. Indeed, due to a different rail gauge than the standard one in the EU and a different rolling stock gauge, as well as permissible lengths of trains and axle loads in rail transport, Ukraine is in a specific situation, significantly different from Poland. The country's size and population density, and the size of major urban centers and their remoteness, are also different to those of Poland. Ukraine is twice the size of Poland, has a higher urbanization rate (70% to 60%), and has twice the number of cities, resulting in four times lower urban saturation per unit area. Ukrainian cities are much more populous than those in Poland. Ukraine's 10 largest cities before the outbreak of war in 2021 had a population of 10.42 million people, compared to 6.27 million in the 10 largest cities in Poland. At the time, Ukraine's 50 largest urban centers were inhabited by 18.96 million people, compared to 11.88 million residents in the equivalent number of centers in Poland. Ukraine, thus, has much more favorable conditions than Poland for the development of rail transport, including high-speed rail with design speeds higher than, for example, those assumed in Poland (250 km/h). However, integrating the railways with the EU rail system remains a challenge.

Ukraine, has much more favorable conditions than Poland for the development of rail transports.

In view of the abovementioned internal factors and the fact that the EU's policy reinforces the emphasis on the development of rail systems for the transport of both goods and passengers over road transport, it is necessary to prepare a targeted plan for Ukraine's rail network for the next three decades, including new segments of the 1435mm network with high-speed rail sections and 1520mm gauge lines as network supplements. The construction of connections with a rail gauge of 1435mm will enable the easier exchange of goods between Ukraine and EU countries, and the creation of a network of high-speed passenger routes useful for both domestic and international transport. The construction of high-speed rail lines in 1435mm standard, which is different to the one in the given country, is a solution used by Spain. Despite having a 1668mm gauge network on its territory, the country is building new lines in 1435mm standard to integrate with the European high-speed rail network. Using two gauges will require infrastructure to integrate rail networks at the junction of standard gauge and wide gauge systems (both linear and point-to-point) for freight exchange. At the same time, plans for the development of rail infrastructure in the country's major urban centers must allow the separation of freight, interregional traffic, and the launch of urban and metropolitan rail systems, along with the integration of the above with the public transport systems in these centers. This includes the need to integrate the rail network with the infrastructure of Ukraine's major airports, improve rail services to Ukraine's major seaports and inland ports, and appropriately locate nodal infrastructure, such as intermodal terminals near highway network exits.

For cost and efficiency reasons, it is important to implement laws and legal tools that allow the implementation of rail infrastructure projects at a fast pace—especially regarding expropriations and property takeovers in terms of ownership even before entry into the EU. In particular, careful preparation is required for the separation of the infrastructure manager from the carrier, as stipulated by EU regulations (i.e., the division of Ukrzalyznica company), so that the resulting freight and infrastructure entities can best carry out their missions. At the same time, it will be very important to establish early uniform technical standards for the reconstructed rail network and rolling stock (e.g., one standard platform height and aligned floor height in vehicles). As part of the rolling stock policy, purchase plans financed with EU funds should be prepared as they will bring the greatest increase in the number of passengers, including purchases of EMUs and new rolling stock (for long-distance travel, including night trips). It will also be necessary to analyze the use of rail in the agglomeration and urban transport in the largest agglomerations of Ukraine and its integration into urban transport systems (e.g., Kyiv, Dnipro, Odessa, Kharkiv, and the Donetsk Basin) together with the essential modernization of infrastructure, the construction of new stations, an extension of additional tracks, the construction of new lines or the purchase of rolling stock in conjunction with investments in public transport systems, an extension of subway, streetcar or trolleybus networks.

It will be necessary to analyze the use of rail in the agglomeration and urban transport in the largest agglomerations of Ukraine.

Given the large reconstruction needs and the likely large, but limited, funds for modernization that will come to Ukraine with EU membership, it will be extremely important to complete all rail investments on time and within budget. For this to happen, it will be necessary to take similar actions to those made in the road area, including the advanced planning of a framework schedule for the implementation of investments so that priority would be given to investments with the greatest importance or economic justification, eliminating the main bottlenecks in the rail network and improving connectivity between the main urban centers of Ukraine and its immediate neighbors to the greatest extent (in terms of freight–passenger volume). Competition with road investments for similar resources means that optimal use of the potential of construction companies will require very good coordination of investments, not only within the railways, but also across the entire infrastructure, taking into account the time dimension (avoiding pile-ups and downtime). In turn, cost control will be fostered by the standardization of procurement and the massive use of prefabrication and mechanization in the construction and modernization of the rail network.

As in the case of roads, environmental issues and the fact that national law should be in line with EU law from the start cannot be ignored. Most of the most urgent railway investments, therefore, must already be prepared environmentally as if Ukraine were a member of the Community. Exceptions to EU transport and infrastructure standards—which, in principle, Ukraine will be obliged to adopt—should address issues related to the Technical Specification for Interoperability (TSI) for railways in terms of rolling stock gauge and other related regulations, and may also address issues related to the length and weight of vehicles approved for the road traffic, and some of the outdated EU regulations hindering the full-scale implementation of autonomous road transport. The European Union requires a far-reaching unification of regulations in many areas specified in the treaties. Usually, this unification is beneficial to member states, but there are exceptions to the rule. There are numerous provisions in treaties and other documents that allow exceptions to unification in special situations.

Possible exception to unification with EU law for railways

Ukraine should consider maintaining its existing rolling stock gauge as compliant with the Technical Specifications for Interoperability (TSI), even for rolling stock for service on lines built with 1435mm gauge. Possible solutions include the use of sleepers for each overhaul or the modernization of a railway line that allows the mechanized remounting of rails to the same sleepers in the new gauge by a track machine (without dismantling the track), and the use of modular solutions as standard in the ordered rolling stock, allowing the replacement of wheel bogies of different gauges in the same type of rolling stock during standard rolling stock revisions. The gauge used in Ukraine is better and more convenient for passengers and freight than the gauge used in most EU countries. The Ukrainian gauge allows for the construction of much more comfortable trains adapted to modern needs, including the use of a 2+3 seating arrangement and an increase in the capacity of a train of the same length by 25% compared to rolling stock with a standard gauge. The only drawback of using a wider rolling stock gauge for internal traffic in Ukraine will be the occurrence of an oversized gap between the European rolling stock (on trains of international relations) and the edge of the platform at the dozen or so stations served by these trains in Ukraine's main cities—in view of which such an exception is justified.

It could also be a beneficial exception to obtain an exemption from the application of crashworthiness standards for HSR rolling stock serving internal traffic on newly built lines with full automation of traffic control and full separation from other types of traffic (road, pedestrian, etc.). The use of crashworthiness standards on lines on which, in principle, the likelihood of train collisions can be completely eliminated, is an expensive archaism. The application of these requirements results in a serious increase in the weight of trains and a deterioration in the competitiveness and efficiency of rail transportation. Built without meeting such standards, the Shinkansen S 500 trains have 46% less weight per passenger than the latest ICE Class 4 trains, which translates into costs for rolling stock use, material consumption, energy, or production itself. There is no logical counter-indication that in such a constrained environment as rail infrastructure, the identical philosophy that applies in air traffic safety standards (in which instead of crashworthiness scenarios for structures, methods are developed to avoid disasters per se) should not be applied.

The introduction of such exceptions could give a boost to the EU as a whole, for the development of much more economical train sets with significantly lower weight and economic parameters, which could be produced in Ukraine.

Source: Authors' compilation

5. Air transport

5.1. Polish experience

EU membership has had a very significant impact on the increase in the amount of air travel and the modernization of Polish airport infrastructure, in particular the modernization of existing airports and the construction of new ones, as well as the regionalization of traffic. In 2005, the 11 airports operating in Poland at the time handled 11.5 million passengers and 60% of the traffic was handled by the port in Warsaw. In 2019, just before the outbreak of the COVID-19 pandemic, 14 airports were operating in Poland, serving 49 million passengers, where the Warsaw airport accounted for 38% of the traffic. There are currently 15 airports in Poland. The TEN-T core network includes the central airport in Warsaw (the new CPK port in the future) and seven regional airports (Kraków, Katowice, Gdańsk, Wrocław, Poznań, Szczecin, Łódź). The TEN-T comprehensive network consists of two airports (Bydgoszcz and Rzeszów). There is also one large regional airport (Warsaw-Modlin) outside the TEN-T network, serving more than 3 million passengers a year. Many regions in Poland want their own airport, although an adequately attractive network of connections could only be established in them if there is adequate demand for services resulting mainly from the population served and its affluence, the international networking of the center served, its attractiveness to tourists, and the competition of other airports in terms of flight offerings and travel times. As a result, despite much higher regional dispersion than before EU accession, air traffic in Poland remains concentrated. In 2022, seven ports handled more than 2 million passengers (of which Warsaw's central port handled almost 10 million) and the other seven did not exceed 1 million passengers (of which six did not exceed 0.5 million passengers). This is because low-traffic airports do not have an attractive route network and are not profitable but are maintained because of regional ambitions even though, often, such an airport has only a few flights a day served by small aircraft—usually leading to the main domestic airport or another hub airport.

European airport policy seeks to integrate airports with railways and, in particular, high-speed rail systems, to ensure the best possible access to the airport by public transport and for railways to take over some of the passenger streams that would otherwise be carried by short air journeys. However, Polish and foreign experience indicates that such integration may make sense when trains pass through an airport in transit on regional or national routes, and not as connections from the city center where the airport is a terminal station and where, on most routes, a change between trains is needed to reach the airport. The construction of through stations at airports that can serve routes in multiple directions requires considerable expense due to the necessary underground sections and the appropriate location of airports, and is mainly possible with the construction of new rail lines or new airports or, as in the case of the Polish CPK project, the simultaneous construction of rail and aviation infrastructure.

5.2. Conclusions for Ukraine

Based on the Polish experience, Ukraine should, on the one hand, prepare for a gradual increase in demand for aviation services, following the country's growing wealth and its integration into European networks as a result of EU integration. On the other hand, the investment process should be carried out in this area taking into account the actual needs (economic and military) of the entire country and its regions in the perspective of the next decades (gradual scaling) while avoiding over-investment for the sake of local development ambitions. Accordingly, Ukraine should divide airports into primary network ports and complementary network ports. The first category will include ports that, due to the population, affluence, networking, scientific and industrial centers, and other characteristics (such as tourist traffic), will enable the construction of an attractive route network and maintain their profitability on a commercial basis. The complementary network ports, however, will be maintained with public funds under a Public Service Obligation (PSO) to provide air transport access for their regions. Such airports should be located in peripheral regions far from major airports and the capital city, in order to connect these regions to the country's main airport or other hubs. However, their construction, must take into account either Ukraine's broader needs (e.g., military) or the need to connect a region unless it has an alternative, such as rail access to a major airport nearby. This is because, with limited demand for aviation services, increasing the supply of airports in a specific area results in traffic dispersion and the low attractiveness of each airport's offerings. Therefore, when organizing an airport network, the basic compromise is to ensure decent accessibility for residents of an area while achieving an attractive air connectivity offer for that area, as measured by the number of destinations to which a given airport provides direct connections. The existence of competing airports has proved to be very important in Poland in the case of, among others, the airport in Łódź (660,000 inhabitants) with competition from the national airport in Warsaw, located about 120km away. Due to its proximity to Warsaw, Łódź airport records 14-fold lower passenger numbers (180,000/year) than the airport in Wrocław (a city with a comparable population to Łódź) and 3.5 times lower passenger numbers than the airport in Rzeszów (with population more than three times lower than Łódź).

Ukraine should strive to integrate all major airports (from the TEN-T core network) into the rail network in accordance with EC guidelines.

Ukraine should strive to integrate all major airports (from the TEN-T core network) into the rail network in accordance with EC guidelines, especially if it takes on the challenge of building new high-speed rail lines or new airports (in case the location of existing airports with the greatest potential proves suboptimal). Integrating major airports into the network of connections communicating with a given airport, while carrying out the usual regional or national routes, will provide a significant increase in the potential of airports and allow good accessibility to cover more of the population while avoiding increasing the number of airports (and therefore dispersing their potential). Such measures also reduce emissions from transportation when some of the freight is taken over by zero-emission rail transport. It would probably be optimal for Ukraine if the TEN-T core network not only included the airports of Kyiv-Boryspol, Dnipro, Kharkiv, and Odessa, but also the airports of Donetsk, Lviv, and Simferopol, which serve large agglomerations. In this context, in the future, the construction of a new airport (placed in the TEN-T core network) shared by the Dnipropetrovsk and Zaporizhzhia regions, integrated with the new rail network and connected by rail and highways to Dnipro, Zaporizhihia, Kryvyi Rih and Nikopol, as well as more distant cities such as Mykolaiv, Kharkiv, and Donetsk (even though, at least the latter two cities will have their own airports with an attractive network of connections) could be considered. Based on its population ratio, the size of the GDP of the Ukrainian region served, and its geographic location, this airport could have development potential comparable to Kiev-Borispol. In addition to the airports of the TEN-T core network, Ukraine may also consider supporting the development of smaller airports outside of it. This includes, for example, the port of Lugansk (assuming that the population of the Donetsk and Lugansk regions does not fall by more than 50% as a result of the war), Rivne, and Kropyvnytskyi. At the same time, Ukraine should make efforts to include, in the TEN-T comprehensive network, at least five airports serving Zakarpattia Oblast, Chernivtsi Oblast (due to their peripheral location and the need to provide a connection to the capital of the country), Vinnytsia Oblast and the Mykolaiv-Cherson region.

6. Intermodal transport

6.1. Polish experience

In the last 30 years, Poland has not attempted to create an intermodal transport system that would cover the country's entire territory. This became one of the main reasons for the railway's loss of the entire dispersed freight market to road transport, until the country's accession to the EU when this form of transport began to develop. The total weight share of intermodal transport using rail in 2021 was 10.9% of the total weight of goods transported by rail, reflecting the more than fivefold increase that has occurred since 2004. This trend should continue in the future because EU regulations related to the decarbonization of transport and burdening road transport with the cost of CO_2 emissions will create more favorable economic conditions for the development of such services. At the same time, intermodal transport is almost entirely subject to market play in Poland today. For this reason, intermodal terminals are being built only where it is commercially profitable to do so. In 2023, 43 of them were operational, including five in seaports and 38 in inland areas. After the accession, for centuries, the development of marine terminals followed the historical conditions of Poland's economic geography based on the Gdańsk area. Therefore, more than 95% of the transshipment capacity is now held by terminals in Tri-City ports (Gdańsk and Gdynia). At the same time, preparations are underway to build a deep-water container port in Swinoujście with a capacity of 2 million TEUs. A similar investment is being carried out in Gdynia. These investments will double the seaports' container handling capacity by 2030.

Existing intermodal terminals mainly handle international trade and are part of global supply chains, serving ports, manufacturing centers, border crossings, and the country's major logistics centers. The main routes of intermodal trains in Poland are shipments to ports in Gdańsk and Gdynia and transit shipments mainly east–west (rail shipments from China), which require reloading at the Polish border due to changes in gauge. The strictly market-oriented nature of the system's organization means that the existing network of terminals in Poland is not distributed evenly, and some voivodeships are completely devoid of intermodal transport service in their area. No intrastate intermodal transportation system allows shipments to be sent and received in every region in the country. There is also no system of scheduled operator trains to ensure that shipments can be transported between terminals on the national network. This deprives railways of the ability to handle dispersed shipments in both intrastate traffic and a significant portion of international traffic, an activity that could allow them to take some of the freight away from trucking.

6.2. Conclusions for Ukraine

Polish experience shows that a nationwide intermodal transport system cannot be created without the initiative and intervention—at least regulatory—of the state administration and the public nature of this type of service. Moreover, the creation of a system with nationwide guaranteed standards of accessibility, speed of shipment delivery, etc.—solely on the basis of the so-called "invisible hand of the market"—is very unlikely. Meanwhile, such a system can be an important tool for improving the competitiveness of the economy, reducing transport costs (in particular external ones), leading to its inter-industry rebalancing and improving the export capacity of producers. This is especially important in a country the size of Ukraine and its location (far from the EU core). In this regard, it should be crucial for Ukraine to use EU funds to build and finance a national intermodal transport system ensuring that areas of the entire country are covered by intermodal transport of specific standards. For this to happen, it would be important to design the system and include its key elements in the TEN-T network, build a network of bimodal and trimodal terminals with accompanying infrastructure, and purchase intermodal rail and road rolling stock. The competitive advantage of this type of transport would be fostered by the launch of intermodal transport through scheduled operator trains that provide the transportation of containers and trailers between all terminals in the country. At the institutional and regulatory level, this requires, among other things, the implementation of regulations allowing state or local governments to build terminals that are part of the public network, as public purpose investments in optimal locations (including the expropriation of land for the aforementioned investments). At the same time, it will be necessary to implement regulations that will allow road intermodal transport to be handled in domestic transport by vehicles with weights and lengths that exceed the permitted standards for EU international transport.

Possible exception to unification with EU law for intermodal transport

For road traffic in intermodal transport for the delivery of an intermodal shipment to a terminal or port, Ukraine could consider allowing vehicles with weights and lengths exceeding the permitted maximum vehicle dimensions based on an exception for the so-called modular concept. Such exceptions are used, for example, by Finland or Sweden where vehicles up to 24 meters in length and weighing up to 60 tons are allowed. Exceptions should allow freight on part of the road network (e.g., on highways) using sets transporting up to two 45-foot sea containers of the full weight allowed for sea and rail transport (this is higher than the weight allowed for road transport in most countries). In this case, the weight of the set would be up to 80 tons and its length would be a maximum of 35 meters.

A similar exception could be considered for heavy electric vehicles operating on highways in intrastate traffic. The introduction of such regulations will improve the efficiency of intermodal transportation and the economic conditions for, for example, the agricultural or manufacturing industries and their export capabilities. The postulated regulations may require improvements in the geometry of some roads and the load-bearing capacity of some bridges, as well as the construction of parking lots for longer vehicles. In the case of Ukraine, which must build an entire network of expressways and reconstruct much of the infrastructure destroyed by warfare, such a solution may be justified and, significantly, reduce the cost of doing business in Ukraine.

Source: Authors' compilation

7. Public transport in cities

7.1. Polish experience

Poland's membership in the EU has allowed it to expand and improve the attractiveness of public transportation systems in all of its largest cities. In particular, EU funds were used to complete the construction of the first subway line in Warsaw and build an another one, expand infrastructure and purchase new rolling stock for all streetcar systems in 14 urban centers that have them, and build a new streetcar system (in Olsztyn). All three of the city's trolleybus systems and dozens of bus systems have been upgraded. The infrastructure for urban and agglomeration railways has been expanded, and rolling stock has been purchased for several urban rail systems. A new metropolitan rail system (in Szczecin) is currently under construction. A single metropolitan association was also created by law, with the main task of organizing public transport in its territory (in the Silesian and Dąbrowa Basin metropolitan area).

These changes have had a major impact on passenger numbers. In 2005, the number of public transportation passengers was about 3,989 million. The number then began to decline, reaching a minimum in 2013 of 3,621 million due to the significant increase in the number of cars at that time. Since 2013, however, the trend has reversed and in the last year before the pandemic, the number of public transportation users nationwide reached 3.865 million—just 3% less than in 2004— although the number of registered cars in Poland doubled during that time. Thus, despite a dramatic increase in alternative travel options, urban transportation has maintained its passenger numbers. At the same time, urban transportation in Poland still has many problems. The flawed Public Transport Act does not provide for the granting of an exclusive concession for transportation on a given route or network of routes, in exchange for the provision of services or the joint organization of transportation by regional and city governments, which is standard in many countries. The budgetary refund system of statutory discounts for the purchase of tickets is also very complicated. The discount levels vary for different modes of transport (buses, trains) and different groups of passengers (schoolchildren, students, and retirees). Moreover, this system does not apply to cities, which causes serious difficulties in building a uniform ticketing system in a given agglomeration. Many local governments also complain about the lack of a statutory solution to the organization of non-urban transportation (e.g., agglomeration-wide or in suburban areas). While there is a district-level administration in Poland (intermediate between the municipal and regional governments), it is not obliged to organize transportation. In view of this, many areas outside the cities remain without transportation services because commercial transport in those areas is not economically viable. Limited tools of influence and the lack of an organizational platform for cooperation also apply to the style of urban transport organizers with the rail infrastructure manager, which is why the reconstruction or construction of infrastructure for urban or agglomeration railway systems is hampered almost all over the country. This is problematic because the EU's Green Deal priorities strongly support zero-emission public transportation in cities and metropolitan areas.

Many areas outside the cities remain without transportation services because commercial transport is not economically viable.

7.2. Conclusions for Ukraine

Following the Polish example, and at the same time drawing conclusions from the revealed problems, Ukraine should support the development of public transport in its cities by building an appropriate legal and organizational environment, and implementing financing tools for the construction of urban-agglomeration public transport systems, including systems based on the better use of railways in urban and suburban transport in Ukraine's largest cities. These systems should be developed so they are integrated with the previously described national passenger rail transport systems and regional public transport systems in terms of common transfer hubs, ticket fares, integrated and dynamic passenger information, etc.

First, this requires that the modernization and expansion of transportation systems in Ukraine's major metropolitan areas (including the construction of subway systems, urban railways, etc.) be planned jointly with city governments, and that Ukrainian railways be prepared to participate in such projects. The latter would involve spinning off companies that would be operators of urban rail systems (such as Sbahn in Berlin or SKM in Warsaw or Gdańsk) and making infrastructure and rolling stock investments to improve or launch such systems—especially on lines in the TENT-T network (e.g., building separate infrastructure for urban traffic in major cities, separating freight traffic and building bypasses of city centers for this traffic to free up capacity for passenger transport). In this context, it is also important to coordinate over time road investments that take transit traffic out of city centers (such as bypasses) with investments in public transportation that reduce car traffic in their centers (such as separated lanes for streetcars/trolleybuses/buses or building bicycle lanes), which are most easily introduced along with a temporary reduction in transit car traffic.

In connection with the European Green Deal, it is important to prepare the expansion of existing urban electric transport systems in smaller centers, including trolleybus systems in particular, which, if retrofitted with battery-powered rolling stock and without catenary constraints, can completely electrify urban transport within these cities. Combining such projects with the construction of local renewable energy sources would simultaneously strengthen the country's resilience and implement EU climate policy. This includes preparing electric or hybrid transportation deployments in smaller urban centers and preparing Ukraine's industry to participate in tenders related to infrastructure construction and rolling stock procurement.

In this context, it is worth considering the implementation of autonomous transport technology in urban transport (for example, replacing "marshrutka" vehicles). Unlike electromobility, which is growing rapidly, autonomous transportation, despite its technical maturity, has not yet been widely approved for use on the road anywhere in the world although it is being developed in many countries. This type of transport is usually run on a test basis in calm traffic zones. At the same time, the obstacles to its implementation are mainly legislative rather than technological. This may be related to the fear of the impact of this technology on the economy of developed countries (and only such countries are technologically advanced enough to implement the system). However, the first major country to introduce regulations that realistically open up the possibility of implementing this technology on the road, at the price of the risks involved (mainly of a political and social nature), would have the opportunity to become the world center for testing these systems and the center of competence and production of a technology whose global impact on the world will be significant. In doing so, it should be noted that autonomous technologies, as a rule, are dual-use technologies; their development also supports the defense capabilities and resilience of a country, which is important in the case of Ukraine's current circumstances.

Technological revolutions as an opportunity for urban transport

In modernizing the infrastructure and regulatory environment of urban transportation, Ukraine can, and should, adapt any solutions to the two ongoing technological revolutions affecting the transportation sector. The first, which is better known, is the battery capacity revolution, enabling the replacement of the internal combustion engine with an electric one in urban transportation. Electrification reduces the cost of vehicle use and the transportation sector's dependence on fossil fuels. However, it requires significant changes in vehicle charging and energy infrastructure.

Another revolution, related to the development of artificial intelligence algorithms, will be the implementation of autonomous transportation. This revolution—technologically feasible today—will bring about radical changes in the way society lives and operates, in the automotive industry, and in all areas of the transportation sector, but especially in urban transportation. In this case, it will likely lead to the creation of a new type of on-demand urban public transport, which, in larger cities, will complement the urban transport system and, in smaller centers will simply replace it.

Most of the autonomous studio passenger vehicles being developed in the world are minibus-scale vehicles, designed to carry up to a dozen people. Their use may resemble the tasks of the so-called "marshrutka" vehicles typical of cities in Ukraine (or the former USSR more broadly). It should be noted that the routes of these vehicles in this case do not have to be fixed, but can be dynamically selected and modified by a computer system that assigns passengers to specific vehicles depending on the purpose of their trip, as specified by them via the app. Such a vehicle, with passengers selected in terms of overlapping travel routes, can independently change the route in order to drop the passenger off exactly at their target location or pick them up from their waiting location. The operation of such a vehicle will, thus, resemble that of a cab service, in which passengers are taken along the way to each individual's destination, while other passengers, selected by the system, whose direction of travel coincides with the vehicle's current route, take their places.

For some 200 Ukrainian towns with a population of 10,000–20,000 (over 2.5 million in total), the system could be the primary public mode of transport. Autonomous vehicles can serve cities by:

a operating as a specific collective cab to complement the urban transportation system;

b being a district (zonal) last-mile transport solution delivering passengers to and from a streetcar, subway, or urban rail stop in a specific area, operating on demand;

c functioning as a conventional scheduled transportation line that is part of urban transportation for routes with small passenger streams.

Source: Authors' compilation

8. Conclusions

- Ensuring Ukraine's internal cohesion, and building a foundation for strong economic growth, requires an efficient, yet internally integrated, transport infrastructure (road, rail, intermodal, air, sea) connecting Ukraine's major agglomerations, as well as linking them to the rest of the EU.

- A good, citizen- and business-friendly transport system will be a key competitive advantage for Ukraine necessary due to its size and remoteness from the EU core. Ukraine should strive to harmonize its plans in this regard with EU goals both by adopting a number of ready-made legal and institutional solutions and by inscribing its own intentions in European investment plans (TEN-T).

- Sustainable connection to the EU transport system requires close cooperation and harmonization of plans with neighboring EU countries, including Poland and Romania in particular, to maximize the country's economy's capacity for uninterrupted and difficult-to-disrupt international trade.

- Poland's experience during its accession process and EU membership can be very useful to Ukraine in developing its transportation infrastructure in each of the areas described (road, rail, air, intermodal, and urban infrastructure).

- Ensuring the high economic efficiency of Ukraine's future transport system will require far-reaching integration of its various subsystems and a focus on intermodality (both in freight and passenger transport).

- In preparing and implementing infrastructure plans, Ukraine must take into account the two basic megatrends that determine the direction of EU transport systems: low-carbon transport and the gradual automation of transport systems.

- Effective construction of a modern transportation network requires a number of institutional changes of a legal and organizational nature, which, in themselves, will benefit Ukraine's development by serving to improve economic relations within the country and raise industrial and technological competence.

- System resilience and redundancy (including the optional alternative export/import routes in the event of a maritime blockade) and the improvement of Ukraine's defense capabilities can be achieved through both the infrastructure investment and technological competence used to build and operate the transportation system.

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