**Quality Of Governance In Poland. An International Comparison**

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***Abstract***

*The article presents a quantitative analysis of the evolution of public governance models in Poland between 1996 and 2019. Its objective is to assess the changes occurring at the level of individual indicators of Worldwide Governance Indicators (WGI) in the context of the transformations in Poland’s public governance system since the 1990s. The study of fluctuations in key dimensions of public governance in Poland indicates that the country has aligned itself with global trends in public governance. These observations are further reinforced by the international perspective.*

***Keywords:*** *quality of governance, Poland, populism, public management models*

**INTRODUCTION**

The article presents the results of statistical analyses aimed at examining the logic behind the evolution of public governance models in Poland from 1996 to 2019. The objective is to assess the changes occurring at the level of individual indicators of the Worldwide Governance Indicators (WGI) in the context of transformations in Poland’s public governance system since the 1990s. Using statistical analysis methods, particularly linear regression analysis and related statistical tests a quantitative examination of fluctuations in key dimensions of public governance in Poland was conducted, complemented by an international perspective.

**LITERATURE REVIEW**

For the purpose of analyzing the quality of governance in Poland – closely linked to public governance reforms – Worldwide Governance Indicators (WGI) were used. These indicators were originally developed by Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobatón (1999). The WGI dataset is published by the World Bank and covers the period from 1996. The construction of the WGI indices is based on 300 individual indicators, which are aggregated into six composite measures reflecting the following aspects of governance:

* **Voice and accountability (GVA):** includes the measurement of political rights, civil liberties, and human rights.
* **Political instability and violence (GPS):** refers to the assessment of the likelihood of violent threats or changes in government, including destabilization through potential unconstitutional acts of violence, such as terrorism.
* **Government effectiveness (GGE)**: includes the evaluation of the professionalism of the public administration and the quality of public services provided.
* **Regulatory quality (GRQ)**: concerns the measurement of the extent of public-sector interference in the market economy.
* **Rule of law (GRL)**: assesses the effectiveness of the judiciary, the quality of contract enforcement, and the protection of property rights.
* **Control of Corruption (GCC)**: this indicator measures the extent to which public power is exercised for private gain, including petty and grand forms of corruption [1].

The basis of the study is the Worldwide Governance Indicators (WGI). This set of indices, published by the World Bank, is derived from information collected from over 30 international sources, such as survey data, reports from government organizations, non-governmental organizations, think tanks, and expert opinions. These data are then aggregated into synthetic indices using a statistical model that includes unobservable components and are updated annually, often incorporating new data sources [2, 3]. The indicators reflect the state of the political system's quality in approximately 200 countries, thus providing a global perspective. These parameters are also frequently used in empirical research in the field of political science, as well as in economics, for example, as variables approximating the perceived political instability of countries in selected dimensions [4, 5]. It should be noted that a certain weakness of the WGI measures is the need for researchers to select sources that form the basis for assigning points in specific categories. In Addition, these measures have been arbitrarily divided into six, somewhat overlapping, categories of governance quality. Despite this, the analysis of changes in the WGI indices offers many benefits, including the wide geographical coverage of the indicators and their comparability between countries, as well as within a given country over time.

**RESEARCH METHODOLOGY**

The primary objective of the article is to valuate the reforms of public governance in Poland between 1989 and 2019. It is assumed that the public governance reforms undertaken in Poland were characterized by chaos, inconsistency, lack of continuity, and an increasing populist drift. Furthermore, four fundamental paradigms of public governance have emerged in the reform processes over recent decades: the bureaucratic model, New Public Management, Public Governance, and Neo-Weberian State. These paradigms form the basis for most public reforms implemented worldwide, typically taking hybrid forms in practice.

The aim of this analysis is to assess the evolution of governance indicators in the context of changes resulting from the transformation of the public management system in Poland since the 1990s. Using statistical analysis methods, particularly linear regression analysis and related statistical tests, it presents a quantitative study of changes in key dimensions of the political system, including citizen participation, political stability, public sector effectiveness, regulatory quality, rule of law, and manifestations of corruption. The study takes into account change in the direction of changes in these indicators across several subperiods. It also examines the interdependencies between indicators related to specific dimensions of governance quality and includes aspects of international comparisons.

**FINDINGS AND DISCUSSION**

Based on the six detailed indicators, an overall governance quality measure was obtained, defined as the arithmetic mean of the six specific dimensions of governance quality (abbreviated as *GM*).

The time frame for the WGI indicators, including data for Poland, spans from 1996. Since 2002, the indicators have been available on an annual basis, but for the earlier period, they are available every two years (1996, 1998, 2000). The values for the three missing years (1997, 1999, 2001) were calculated as the average of the two adjacent observations. Importantly, the index values for Poland, as well as for all countries included in the WGI database, should be interpreted in relative terms, with reference to other countries. The indicators are normalized for each year and range from approximately -2.5 to approximately 2.5, with an expected value of zero, describing the "average" country in a given category in a given year, and a standard deviation of one. Higher index values indicate that a given country has a relatively better political system, fulfilling the specified criteria to a greater extent than other countries, rather than suggesting that certain objective governance quality indicators have reached specific threshold values.

Fig. 1 presents the trend of WGI governance quality indicators for Poland from 1996 to 2019. The index values show no consistent trend throughout the entire period. However, some co-movement between the indicators is noticeable. From 2004 to 2014, all exhibit an upward trend, which reverses after 2015. The descriptive statistics, presented in Table 1, further highlight the relatively large variability of the dimensions of governance quality in Poland, as well as fluctuations in individual indicators. The average value of the general *GM* indicator was 0.697, with its values ranging from 0.472 in 2007 to 0.888 in 2014. At the same time, the averages for the citizen participation indicator (GVA) and regulatory quality (GRQ) were above the general average. On the other hand, the remaining indices, particularly those related to public sector effectiveness (GGE) and corruption control (GCC), were generally below the overall indicator.



**Figure 1.** Changes in the level of WGI indicators in Poland from 1996 to 2021

Source: own study based on the WGI database.

**Table 1.** Descriptive statistics of the levels of governance indicators (WGI) in Poland

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | $$GM$$ | $$GVA$$ | $$GPS$$ | $$GGE$$ | $$GRQ$$ | $$GRL$$ | $$dGCC$$ |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Mean |  0,697 |  0,947 |  0,676 |  0,549 |  0,832 |  0,619 |  0,561 |
| Median |  0,680 |  1,021 |  0,630 |  0,574 |  0,827 |  0,639 |  0,641 |
| Max |  0,888 |  1,105 |  1,072 |  0,768 |  1,063 |  0,871 |  0,791 |
| Min |  0,472 |  0,587 |  0,153 |  0,292 |  0,616 |  0,382 |  0,106 |
| Std. deviation |  0,124 |  0,159 |  0,251 |  0,127 |  0,141 |  0,164 |  0,188 |

Notes: Descriptive statistics were calculated for the entire period covered by the study, i.e. the years 1996–2021.

Source: own study.

***Changes in Governance Quality Indicators Over Time: Analysis by Subperiods***

In proceeding with the quantitative analysis of changes in the WGI indicators in Poland, several further remarks regarding the specificity of these indicators and their potential for quantitative analysis should be made. First, due to the shifts in the index values and the occasional transient increasing or decreasing trends they exhibit, the basis for statistical analysis consists of the changes in the indices, calculated as their year-on-year variations. Interpreting the changes in WGI indicators in the short term, such as for one or two years, or around specific political events, e.g. changes in government, would be unjustified and prone to potential errors. This is due to both possible inaccuracies in the estimates arising when the World Bank constructs the indicators, primarily associated with the statistical procedures used and changes in the collection of domestic and international data sources that form the basis for their construction. Therefore, changes in WGI indicators should be interpreted over a longer time period, such as several years, considering their average increments rather than changes in specific years. For this reason, the analysis adopts a division into longer subperiods. To this end, the four subperiods introduced earlier in the paper are used, resulting in the following periodization: (a) pre-accession period. (the years 1997-2004; labelled: $P\_{1}$), (b) the post-accession period (2005-2014; $P\_{2}$) and (c) the populist drift period (2015-2021; $P\_{3}$). Due to the lack of WGI index data for the period before 1996, this part of the analysis does not include the subperiod related to the beginning of the political transformation in Poland. To increase the number of observations in the final subperiod of the analysis, which is advantageous from the perspective of the statistical methods used, it was decided to extend the $P\_{3}$subperiod until 2021.

Fig. 2 presents the changes in WGI indicators from 1997 to 2021, along with the delineation of three subperiods, marked on the chart as: $P\_{1}$, $P\_{2}$ and $P\_{3}$ respectively. Furthermore, Table 2 includes descriptive statistics for index increments, both for the entire period and for individual subperiods. These statistics show that, throughout the period of 1997–2021, both the overall governance measure *GM* and most of the individual indicators exhibited slightly negative dynamics. On average, the aggregate index decreased by approximately 1 point per year. However, this negative trend was primarily driven by the first and third subperiods, with average changes of -3.878 and -4.963, respectively, while the $P\_{2}$ period was characterized by an average positive change of 4.068 points. In the subperiod $P\_{1}$. The most negative changes were observed in indicators of voice and accountability ($dGVA$) and government effectiveness ($dGGE$). These same indicators also showed the most negative dynamics in subperiod $P\_{3}$. In contrast, the positive changes in the second subperiod were largely driven by improvements in political stability (*dGPS*) and control of corruption (*dGCC*).



**Figure 2.** Changes in WGI Indicators in Poland, 1997–2021

Source: Own study.

A more precise description of the changes in the WGI indicators across sub-periods requires the implementation of appropriate statistical tests to identify potential differences in the behaviour of these indicators. To achieve this goal, a linear regression model was employed to explain changes in the indices. In this regression, dummy variables (binary variables with values of zero or one) corresponding to the defined subperiods of the analysis were introduced as explanatory variables. The estimated regression model takes the following form:

$dG\_{t}^{i}-\overbar{dG}^{i}=θ\_{1}P\_{1t}+θ\_{2}P\_{2t}+θ\_{3}P\_{3t}+ε\_{t}$$dG\_{t}^{i}-\overbar{dG}^{i}=θ\_{1}P\_{1t}+θ\_{2}P\_{2t}+θ\_{3}P\_{3t}+ε\_{t}$, (1)

In this model $dG\_{t}^{i}$ denotes the changes (increments) in the individual WGI indicators for Poland, while $\overbar{dG}^{i}$, represents their average over the entire study period. The dummy variables $P\_{1t}$, $P\_{2t}$, $P\_{3t}$ take the value of "1" for the respective subperiods of the analysis and "0" otherwise. The term εtεt​denotes the regression's error component. By using deviations of variables from their mean (so-called demeaning), the average value of the variable $G\_{t}^{i}-\overbar{G}^{i}$ is equal to zero. This, in turn, makes it possible to include all three of the above-defined dummy variables in the equation – covering the entire study period – without the need to introduce an intercept into the regression equation[[1]](#footnote-1). The advantage of this specification lies in its compact and efficient nature. It allows for a simultaneous evaluation and comparison of differences in indicator dynamics across the three periods, in a manner similar to classical analysis of variance, without the need to estimate separate regressions for each subperiod which would be further complicated by the low number of observations. The parameter estimates $θ\_{1}$, $θ\_{2}$ and $θ\_{3}$ indicate the deviations of the average change in the indicator during each period from zero. The regression model was estimated using the ordinary least squares method, with robust standard errors for parameter estimates[[2]](#footnote-2).

**Table 2.** Changes in WGI Indicators During the Entire Period and by Subperiods of the Study

|  | $$dGM$$ | $$dGVA$$ | $$dGPS$$ | $$dGGE$$ | $$dGRQ$$ | $$dGRL$$ | $$dGCC$$ |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Entire period (1997-2021) |
| Mean | -1,004 | -1,822 | -1,272 | -1,553 |  0,460 | -1,291 | -0,543 |
| Median | -0,002 | -0,597 |  0,397 | -2,789 |  3,781 |  1,563 |  0,903 |
| Max |  13,208 |  10,699 |  32,881 |  11,418 |  13,926 |  14,154 |  16,895 |
| Min | -14,059 | -19,556 | -42,422 | -18,408 | -16,078 | -21,183 | -29,551 |
| Std. deviation |  6,669 |  6,927 |  18,480 |  7,270 |  7,719 |  9,235 |  9,890 |
| Subperiod $P\_{1}$ (1997-2004) |
| Mean | -3,878 | -0,325 | -8,459 | -2,995 |  0,423 | -4,389 | -7,523 |
| Median | -2,322 |  0,505 | -8,096 | -2,833 |  0,840 | -3,354 | -4,677 |
| Max |  0,021 |  2,245 |  21,734 |  5,799 |  6,387 |  1,856 |  4,0320 |
| Min | -13,620 | -7,522 | -42,422 | -7,137 | -5,417 | -16,014 | -29,551 |
| Std. deviation |  4,909 |  3,103 |  23,446 |  3,948 |  4,946 |  6,961 |  11,905 |
| Subperiod $P\_{2}$ (2005-2014) |
| Mean |  4,068 |  0,885 |  6,890 |  3,267 |  3,046 |  4,553 |  5,761 |
| Median |  4,975 |  2,369 |  4,088 |  3,704 |  5,018 |  4,295 |  4,253 |
| Max |  13,208 |  10,699 |  32,881 |  11,418 |  13,236 |  14,154 |  16,895 |
| Min | -7,589 | -14,083 | -13,041 | -11,620 | -11,091 | -8,732 | -1,766 |
| Std. deviation |  5,771 |  8,047 |  14,525 |  7,2311 |  7,046 |  6,041 |  6,327 |
| Subperiod $P\_{3}$ (2015-2021) |
| Mean | -4,963 | -7,398 | -4,721 | -6,793 | -3,189 | -6,101 | -1,574 |
| Median | -4,682 | -6,538 | -0,367 | -6,707 | -5,077 | -4,388 | -1,276 |
| Max |  2,459 | -2,758 |  7,111 | -0,010 |  13,926 |  11,726 |  6,547 |
| Min | -14,059 | -19,556 | -36,761 | -18,408 | -16,078 | -21,1834 | -7,901 |
| Std. deviation |  5,258 |  5,666 |  14,644 |  6,422 |  10,421 |  11,539 |  5,780 |

Source: Own elaboration.

Table 3 presents the results obtained from the regression models for the changes in the average governance quality indicator and the six specific WGI dimensions. The parameter estimates shown in column (1) of the model, treated as the baseline, for the variable $dGM$, indicate that, at a statistical significance level of 0, the changes in the average index deviate negatively from zero in the first and third periods ($P\_{1}$ and $P\_{3}$), while in the second period ($P\_{2}$). However, these deviations are stronger – as shown by the higher absolute values of the point estimates and relatively lower standard errors, in the second and third periods. The baseline regression model is characterized by a relatively high coefficient of determination 0,4 which is notable given the compact nature of the model specification.

The trends observed for the specific parameters are generally consistent with those found for the overall index, although there are significant differences among them. The strongest changes across all subperiods were observed for the $dGGE$. In this case, the negative and positive estimates for the coefficients in$ P\_{2}$ and $P\_{3}$ oscillate around absolute values of 5. The regressions for the variables $dGRL$ and $dGGC$, shown in columns (6) and (7) indicate high changes only in the second subperiod. The regression for$ dGVA$ reveals a significant decline in the index in the third subperiod. In the two regression models estimated for the indices $dGPS$ and $dGRQ$ presented in columns (3) and (5), no statistically significant deviations from zero were found in any of the subperiods, although the signs of the estimated parameters are consistent with the estimates for the baseline regression (1).

**Table 3.** The results of the regression model estimates for changes in governance indicators in Poland

| Dep. variable: | $$dGM$$ | $$dGVA$$ | $$dGPS$$ | $$dGGE$$ | $$dGRQ$$ | $$dGRL$$ | $$dGCC$$ |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| $$P\_{1t}$$ | -2,874\*(1,598) | 1,496(0,988) | -7,187(7,200) | -1,442\*(0,718) | -0,037(1,634) | -3,098(2,081) | -6,980(4,171) |
| $$P\_{2t}$$ | 5,071\*\*\*(1,658) | 2,707(2,481) | 8,164(5,590) | 4,821\*\*(2,205) | 2,585(1,989) | 5,845\*\*\*(1,959) | 6,305\*\*\*(1,116) |
| $$P\_{3t}$$ | -3,959\*\*(1,832) | -5,577\*\*(2,193) | -3,449(4,346) | -5,240\*\*\*(1,582) | -3,651(2,954) | -4,810(4,898) | -1,031(1,999) |
| $$R^{2}$$ | 0,406 | 0,268 | 0,142 | 0,348 | 0,112 | 0,284 | 0,339 |
| $R^{2}$(adj.) | 0,352 | 0,202 | 0,064 | 0,289 | 0,031 | 0,218 | 0,278 |

Notes: The table presents the results of the regression analysis described by equation (1). Standard errors of the parameter estimates, shown in parentheses, were calculated with a correction for heteroskedasticity and autocorrelation of residuals (Newey-West). Significance levels of p-values are denoted as follows: p: \*\*\* < 0,1, \*\* < 0,05, \* < 0,1.

Source: Own study.

A key conclusion drawn from this analysis is the contrasting, significant fluctuations in the dynamics of the indicators in the first and third subperiods compared to the second one. Interestingly, although the most clearly noticeable difference is between the positive changes in $P\_{2}$ and the negative changes in $P\_{3}$, it seems that the sources of both shifts were different. In the post-accession period, the increase in indicator values was driven by high average growth rates in the rule of law ($dGRL$), control of corruption ($dGCC$) and government effectiveness ($dGGE$), indices, which can be associated with the positive public governance transformations and the raising of its operational standards following Poland's accession to the EU. In the last subperiod of the analysis, the populist drift period ($P\_{3}$), the decline in the overall governance quality index was caused by the reduction of just one of the three aforementioned indices – the public sector effectiveness index ($dGGE$) – but it was primarily linked to the negative dynamics of the voice and accountability ($dGVA$). index. It is worth noting that the first of these indicators directly refers to the quality of the civil service and the independence of courts and media, which may be related, among other things, to the growing political crisis in Poland surrounding the judicial system and the Constitutional Tribunal, as well as the politicization of public media. The shifts observed during the$ P\_{3}$ period were less dependent, for instance, on changes in the $dGPS$, index, which seems natural given the absence of political violence or moderate terrorist threats in the country. The differences observed between the changes in the individual indicators naturally lead to the question of the interdependencies between them and the potential shifts in these relationships during the studied period.

***Changes in the correlations between indicators***

To perform a statistical analysis of the correlations between changes in specific Worldwide Governance Indicators (WGI) in Poland, an extension of the previously used regression model with artificial variables was used, supplemented with the correlations between the indicators and shifts in these correlations between the subperiods studied. This time, while estimating regressions for pairs of detailed indicators, the correlations between changes $G\_{t}^{i}$in the -th and $G\_{t}^{j}$-th indicator were taken into consideration. The following specification of the regression model was adopted:

$dG\_{t}^{i}-\overbar{dG}^{i}=θ\_{1}P\_{1t}+θ\_{2}P\_{2t}+θ\_{3}P\_{3t}+θ\_{4}\left(dG\_{t}^{j}-\overbar{dG}^{j}\right)×P\_{1t}++θ\_{5}\left(dG\_{t}^{j}-\overbar{dG}^{j}\right)×P\_{2t}+θ\_{6}\left(dG\_{t}^{j}-\overbar{dG}^{j}\right)×P\_{3t}+ε\_{t}$ (2)

where the indicator constituting the dependent variable is denoted by $dG\_{t}^{i}$, the explanatory variable is denoted by $dG\_{t}^{j}$, and $\overbar{dG}^{i}$ and $\overbar{dG}^{j}$ signify their average values. As is the case with (1), the first three explanatory variables in equation (2) include artificial variables indicating shifts in the average value of changes in the explained indicator in relation to zero. The next three components include values built as interactions of artificial variables and deviations from zero of the second indicator in a pair, illustrating the connections between changes in indicators $G\_{t}^{i}$ and $G\_{t}^{j}$ in subsequent subperiods. Positive and statistically significant estimations of the variable interaction parameter ($θ\_{4}$, $θ\_{5}$and $θ\_{6}$) will imply the presence of a positive correlation ‒ they will decrease and/or increase together. Negative estimations will have the opposite interpretation. The advantage of this specification is also the opportunity to obtain an aggregate ‘two-sided relationship’ between changes in the two indicators ‒ $G\_{t}^{i}$and $G\_{t}^{j}$ ‒ which permits an additional check on the strength of their relationship.

Since each of the six WGI can be explained by the remaining ones, the adopted procedure results in the estimation of a total of 30 combinations of regression models. Due to the large number of estimations to be performed, the author decided to present the estimations of their key parameters in a cross-sectional manner, i.e. coefficients $θ\_{4}$, $θ\_{5}$ and $θ\_{6}$ modifying the interaction variables as confidence intervals of the estimations of these parameters. For these reasons, Table 4 contains 90 confidence intervals of correlations obtained from all the models. Their analysis reveals four important change patterns.

First, 52 confidence intervals, i.e. almost 58% of the total, indicate statistically significant correlations between indicators at 0.1% in one of the subperiods. A further 36 of them, or 40% of all pairs and more than 69% of all coefficients with significant estimations, uncover significant positive correlations between changes in indicators. In contrast, negative correlations were obtained for 16 estimations, i.e. nearly 18% of all pairs and almost 31% of statistically significant parameter estimations.

Second, the indicators for which the strongest correlations were observed, involved changes in civic participation ($dGVA$) and rule of law ($dGRL$) indicators, where positive correlations were for all the subperiods, as well as the pairs $dGPS$ ‒ $dGRL $and $dGVA$ – $dGRQ$. Much weaker correlations were found between changes in corruption control ($dGCC$) and other indicators, however, in the third subperiod, negative correlations were revealed not only between changes in indicators but also for pairs of indicators of political stability ($dGPS$), public sector efficiency ($dGGE$), and regulatory quality ($dGRQ$).

**Table 4.** Estimation results of the correlations between individual WGI

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Change, dependent variable: | $$dGVA$$ | $$dGPS$$ | $$dGGE$$ | $$dGRQ$$ | $$dGRL$$ | $$dGCC$$ |
| Interactions: | (1) | (2) | (3) | (4) | (5) | (6) |
| $$dGVA$$ | $$P\_{1t}$$ | – | **(0.047; 4.266)** | **(-1.588;-0.506)** | **(-1.728; -0.135)** | **(1,393; 2,295)** | (-3.056; 1.812) |
| $$P\_{2t}$$ | (-0.784; 1.281) | **(0.557; 0.855)** | **(0.016; 0.992)** | **(0.089; 0.822)** | (-0.224; 0.410) |
| $$P\_{3t}$$ | **(1.987; 2.924)** | (-0.127; 0.283) | (-0.322; 1.067) | **(0.916; 1.518)** | **(-0.798; -0.391)** |
| $$dGPS$$ | $$P\_{1t}$$ | **(0.007; 0.069)** | - | (-0.115; 0.064) | **(-0.239; -0.109)** | **(0.182; 0.278)** | (-0.360; 0.506) |
| $$P\_{2t}$$ | (-0.235; 0.388) | (-0.184; 0.230) | (-0.007; 0.299) | **(0.040; 0.250)** | **(0.049; 0.370)** |
| $$P\_{3t}$$ | **(0.339; 0.396)** | **(0.014; 0.196)** | (-0.228; 0.535) | **(0.300; 0.482)** | **(-0.306; -0.120)** |
| $$dGGE$$ | $$P\_{1t}$$ | **(-0.797; -0.497)** | (-4.341; 2.544) | – | (-0.237; 0.742) | **(-1.709;-0.394)** | **(1.134; 2.967)** |
| $$P\_{2t}$$ | **(0.520; 1.229)** | (-0.715; 0.901) | **(0.290; 1.029)** | **(0.027; 1.081)** | **(0.080; 0.610)** |
| $$P\_{3t}$$ | (-0.173; 0.294) | (-0.085; 1.182) | **(0.091; 1.939)** | (-1.737; 1.104) | (-0.543; 0.365) |
| $$dGRQ$$ | $$P\_{1t}$$ | **(-0.584; -0.150)** | **(-6,042; -1,790)** | (-0.255; 0.577) | – | **(-1.661; -0.865)** | (-2.430; 0.630) |
| $$P\_{2t}$$ | **(0.178; 1.137)** | (-0.044; 1.287) | **(0.345; 1.044)** | (-0.008; 1.081) | (-0.302; 0.531) |
| $$P\_{3t}$$ | **(0.021; 0.199)** | **(0.054; 0.553)** | **(0.119; 0.652)** | (-0.666; 0.786) | **(-0.347; -0.008)** |
| $$dGRL$$ | $$P\_{1t}$$ | **(0.219, 0.514)** | **(1,441; 3,787)** | **(-0.656; -0.020)** | **(-0.910; -0.365)** | – | (-1.146; 1.224) |
| $$P\_{2t}$$ | **(0.534; 1.084)** | **(0.301; 1.380)** | **(0.389; 1.199)** | **(0.322; 1.136)** | **(0.194; 0.773)** |
| $$P\_{3t}$$ | **(0.036; 0.551)** | (-0.136; 1.398) | (-0.587; 0.391) | (-0.540; 0.638) | (-0.272; 0.220) |
| $$dGCC$$ | $$P\_{1t}$$ | (-0.228; 0.147) | (-1.176; 1.741) | **(0.064; 0.386)** | (-0.409; 0.098) | (-0.385; 0.411) | – |
| $$P\_{2t}$$ | (-0.369; 0.669) | **(0.581; 1.631)** | **(0.098; 0.804)** | (-0.411; 0.695) | (-0.005; 0.887) |
| $$P\_{3t}$$ | **(-0.998; -0.143)** | **(-2.549; -0.187)** | (-0.743; 0.523) | **(-1.067; -0.089)** | (-1.040; 0.832) |

Notes: The table shows 90% confidence intervals of the parameter estimations for the interactions of the variables in equation (2). The table header contains the dependent variable, whereas the rows show the explanatory variables and artificial variables corresponding to a given specification. Standard errors of parameter estimations were calculated adjusted for heteroskedasticity and autocorrelation of residuals (Newey‒West). Confidence intervals that reveal positive, statistically significant parameter estimations at 0.1% are marked in bold black font, whereas negative estimations defined in a similar manner are marked in bold gray font.

Source: own study.

Third, the number of significant correlations occurring in each of the three subperiods selected for analysis is comparable, ranging from 16 to 18. However, what is noteworthy is a large number of negative estimations for $P\_{1}$ (10) and $P\_{3} $(6), in the absence of negative estimations for $P\_{2}$. When the obtained estimations are cross-referenced with the previously presented trends and descriptive statistics illustrating indicator changes, it is clear that in the post-accession period (2005‒2014), the dynamics of the dominant proportion of the indicators were similar ‒ most of them increased at the same time, as evidenced, for example, by a significantly positive correlation between the rule of law (dGRL) and all other changes in indicators. In many cases, such as variables related to citizen participation, regulatory quality, and rule of law, the coefficients maintain positive estimations in the third subperiod studied, implying that the indicators corresponding to these estimations have decreased concurrently. As evidenced by numerous negative and statistically insignificant estimations of the parameters underlying the interactions between the variables for the subperiod in question, the general declines in indicators for the 2016‒2021 populist drift did not result in reductions in all of the specific indicators.

Fourth, it is important to pay closer attention to cases in which the identified correlations changed between periods, as this may indicate both a change in the statistical significance of parameter estimations at 0.1% and a sign change of significant estimations. The analysis reveals 17 such cases between $P\_{1}$ and $P\_{2}$, and 22 pairs of indicators between $P\_{2}$ and $P\_{3}$. In particular, in $P\_{3}$, 13 pairs lost their positive correlations identified in $P\_{2}$ or the correlation changed signs from positive to negative. This means that shifts in the correlations between the indicators in the studied subperiods occurred fairly frequently, conditioned by the trajectory of changes in specific dimensions of the functioning of the public governance system in a given subperiod.

***International comparison***

In the next part of the analysis, the results obtained thus far were extended to compare WGI internationally. The values of the indicators in Poland were compared with those of three countries: Germany as an ‘old’ EU Member State, Poland's largest neighbor and economic partner, with an average high value of all detailed WGI metrics, as well as two countries in the region, namely the Czech Republic and Hungary, which ‒ having undergone the process of political and economic transformation alongside Poland ‒ constitute an important point of reference for the trends observed in Poland’s public governance system.

The mean of six distinct indicators yielded the aggregated values of WGI, which are displayed in Fig. 3 (Table 5 provides descriptive information for each indicator). Germany's indices, with a mean of 1.482 and a standard deviation of 0.057, are by far the highest and most consistent. The Czech Republic has the highest indicator mean and median (both around 0.9) and lowest standard deviation among the Central European nations. In light of this, Hungary and Poland stand out for having lower average values of the main WGI and greater variability, particularly for the former.

Based on the existing analytical framework, the following linear regression equation was proposed to assess changes in the international correlations of governance quality indicators

:$\left(G\_{t}^{PL, i}-\overbar{G}^{PL, i}\right)-\left(G\_{t}^{R, i}-\overbar{G}^{R, i}\right)=θ\_{1}P\_{1t}+θ\_{2}P\_{2t}+θ\_{3}P\_{3t}+ε\_{t}$$\left(G\_{t}^{PL, i}-\overbar{G}^{PL, i}\right)-\left(G\_{t}^{R, i}-\overbar{G}^{R, i}\right)=θ\_{1}P\_{1t}+θ\_{2}P\_{2t}+θ\_{3}P\_{3t}+ε\_{t}$, (3)

where $G\_{t}^{PL, i}$is the level $i$of the -th WGI for Poland, $G\_{t}^{R, i}$is the level of the same indicator in the reference country, and $\overbar{G}^{PL, i}$and $\overbar{G}^{R, i}$are the mean values of these indicators for Poland and the reference country, respectively. Again, the values $P\_{1t}$, $P\_{2t}$ and $P\_{3t}$ denote artificial variables taking the value of 1 for a given studied subperiod or 0 otherwise. Such a regression allows one to ascertain the reciprocal change in the correlation of indicators between two countries (in relative terms) with respect to global trends in governance quality, taking into account the method of constructing the indicators, particularly their normalization based on the values obtained for all the countries studied. Positive estimations of the parameters $θ\_{1}$, $θ\_{2}$ and $θ\_{3}$ in equation (3) will therefore determine the relative closeness of WGI for Poland to the reference country, such as Germany. Negative estimations, on the other hand, will imply divergence, i.e. negative changes in the indicators observed in Poland in regard to the reference country.



**Figure 3. Aggregated WGI levels for Poland, Germany, the Czech Republic, and Hungary in 1996–2021**

[Poland, Germany, Czech Republic, Hungary]

Note: The aggregated indicators represent the mean of six detailed WGI governance quality indicators for each country.

**Table 5.** Descriptive statistics of aggregated WGI: international comparison

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Poland | Germany | Czech Republic | Hungary |
|  | (1) | (2) | (3) | (4) |
| Mean | 0.697 | 1,482 | 0.871 | 0.745 |
| Median | 0.680 | 1,474 | 0.906 | 0.774 |
| Max | 0.888 | 1,566 | 1.012 | 1.018 |
| Min | 0.472 | 1,376 | 0.529 | 0.429 |
| Std. deviation | 0.124 | 0.057 | 0.103 | 0.204 |

Source: own study.

Table 6 displays the estimation results of the regression models from equation (3). As with the previous stage in the analysis, the table includes 90% confidence intervals for critical parameter estimates. In general, the relationships discovered in this manner are weak. At the significance level of 0.1%, only 17 of 63 confidence intervals (fewer than 27%), show statistically significant associations. Ten estimations, or slightly more than 58% of significant estimations, and only slightly more than 15% of all bilateral correlations have positive values, indicating a substantially higher rate at which the indicator in Poland rose as compared to the reference country in a given subperiod. It is also worth noting that the positive or negative confidence intervals are usually wide, which indicates a significant uncertainty of the relationships studied.

For Germany, significant estimations were only obtained for two indicators. For the Poland‒Germany pair in the second subperiod, the regression for the corruption control indicator ($GCC$) shows a positive correlation, whereas the parameter estimation for the third subperiod for citizen participation and control ($GVC$) is negative. This implies that despite a fairly rapid increase in the values of most specific WGI in Poland in the post-accession period ( $P\_{2}$), there was no discernible reduction in the gap between Poland and Germany. Moreover, during the post-2015 populist drift, there was even a relative decline in civic participation compared with Germany.

**Table 6.** Estimations of international correlations of changes in WGI in Poland

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Dependent variable: | $$GM$$ | $$GVA$$ | $$GPS$$ | $$GGE$$ | $$GRQ$$ | $$GRL$$ | $$GCC$$ |
| Reference country: | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| Germany | $$P\_{1t}$$ | (-4.254; 3.093)(-1.175; 9.696)(-4.359; 2.286) | (-4.799; 2.883) | (-17.01; 23.38) | (-4.001; 11.02) | (-5.605 4.679) | (-6.305; 0.139) | (-13.17; 1.824) |
| $$P\_{2t}$$ | (-1.128; 7.007) | (-4.514; 19.61) | (-1.995; 11.14) | (-5.737; 5.209) | (-4.082; 11.46) | **(3.985; 10.15)** |
| $$P\_{3t}$$ | **(-9.632; -1.784)** | (-5.716; 9.022) | (-0.824; 4.518) | (-11.71; 5.322) | (-6.804; 5.426) | (-5.475; 5.228) |
| Czech Republic | $$P\_{1t}$$ | (-9.343; 6.370) | (-4.237; 9.447)(-2.187; 6.364)**(-10.03; -0.400)** | (-9.510; 9.086) | **(-12.01; -0.572)** | (-9.166; 8.745) | (-8.632; 4.958) | (-17.93; 11.98) |
| $$P\_{2t}$$ | (-0.604; 6.601) | (-4.031; 15.23) | (-4.516; 7.209) | (-3.519; 6.501) | (-2.881; 5.557) | **(2.069; 10.17)** |
| $$P\_{3t}$$ | **(-9.097; -1.790)** | (-10.71; 6.637) | **(-14.19; -0.988)** | **(-15.99; -3.155)** | (-12.25; 2.607) | **(-5.893; -0.928)** |
| Hungary | $$P\_{1t}$$ | **(-2.847; -0.154)** | **(1.262; 3.314)** | (-9.108; 0.859)(-2.943; 24.10)(-11.36; 2.455) | (-5.190; 5.968) | (-8.005; 2.915) | (-5.394; 4.041) | (-11.08; 2.404) |
| $$P\_{2t}$$ | **(5.982; 14.97)** | **(5.900; 16.38)** | **(3.222; 12.90)** | **(1.698; 14.80)** | **(3.884; 17.78)** | **(10.36; 17.64)** |
| $$P\_{3t}$$ | (-4.296; 1.744) | (-5.128; 3.379) | (-11.32; 2.567) | (-3.171; 6.299) | (-13.88; 7.584) | (-0.594; 7.891) |

Notes: The table shows 90% confidence intervals of parameter estimations $θ\_{1}$, $θ\_{2}$and $θ\_{3}$ accompanying artificial variables in equation (3). The table header contains the dependent variable, whereas the rows list the reference countries and artificial variables corresponding to a given specification. Standard errors of parameter estimations were adjusted for heteroskedasticity and autocorrelation of residuals (Newey‒West). Confidence intervals that indicate positive, statistically significant parameter estimations at 0.1% are marked in bold black, whereas similarly defined negative estimations are marked in bold gray.

Source: own study.

For the Czech Republic in $P\_{2}$, a positive parameter estimation for $GCC$ (similar to the models for Germany) was obtained and generally weak relationships for the first two subperiods were observed. What is noteworthy in this context, however, are as many as five negative parameter estimations for the Poland‒Czech Republic pair in $P\_{3}$. Such a large number of negative values reveal that in the third period studied (after 2015), the distance between WGI for Poland increased statistically significantly and unfavorably in relation to the Czech Republic. Moreover, a relative decline in the indicators in Poland compared with the Czech Republic was observed for all the detailed indicators except political stability ( $GPS$) and rule of law ($GRL$).

For the Poland‒Hungary pair, completely different trends were observed than for the two previous countries: as many as six indicators, or all except political stability, reveal significantly positive correlations for $P\_{2}$. This was associated with different trends in both the aggregated indicator and detailed ones for both countries in 2005‒2014. While the indicators for Hungary were on a downward trend at the time, those for Poland were rising, improving Poland's relative position vis-à-vis Hungary. Nevertheless, in the third subperiod, none of the estimated parameters is statistically significant, which means that WGI remain similar in Poland and Hungary after 2015.

**CONCLUSION**

The central aim of article was to assess the public governance reforms in Poland undertaken from 1989 to 2022, and to identify the directions for changes aimed at improving the quality of public governance. Public governance reforms undertaken in Poland were characterized by chaos, inconsistency, and a growing populist drif” ought to be regarded as accurately formulated and confirmed by empirical evidence. The reform strategies for public governance in Poland are consistent with international trends. The fact that public governance tools and procedures have been introduced much later than other countries sets the country apart from the generally recognized international path of modernizing the public sector. For the sake of clarity of argument, the analysis of the issue included in the content of this objective was divided into four periods: political transformation (1989‒1997), pre-accession period (1997‒2004), post-accession period (2004‒2015), and the populist drift (2015‒2022). The analysis of international public governance reform processes clearly indicates the key role of the circulation of ideas in initiating modernization processes and triggering institutional change, which, among other things, leads to the emergence of new public governance models. When it comes to the direction of further research, it is worth focusing on analysing the consequences of the populist drift, both in the social and economic dimensions, within the studied countries, and comparing the phenomenon of populist drift between the European and American continents.

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1. [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)