

Cycle: Poland compared to the world

### **Report title:**

Authoritarian and liberal notions of democracy – international comparative analysis including Poland

### **Social objective:**

The objective of the report is to promote knowledge about selected phenomena and problems within social sciences applying quantitative data. This objective develops the original concept of the Centre for Quantitative Research of the Institute of Political Science, University of Wrocław and its mission to promote science. The report is published in open access.

### **Research objective:**

The objective of the report is to present the current levels of the authoritarian and liberal notions of democracy in Poland as compared to selected other countries. This will be achieved by answering the following questions:

- 1) What is the average level of the liberal and authoritarian notions of democracy in Poland and worldwide? Which of the two is dominating in Poland and internationally?
- 2) Is the Polish society statistically significantly different in terms of liberal and authoritarian understanding of democracy as compared to the global indicator and other individual countries?
  - 2.1) If yes, which societies display higher indices of the liberal notion of democracy than the Polish society?
  - 2.2) If yes, which societies display higher notions of the authoritarian notion of democracy than the Polish society?

### **Introduction**

Democracy is one of the major research subjects in political science, in Poland as well as worldwide. The current increased interest in these issues is a result of the decreasing number of democratic states. This shows that the democratic system in some states was not equipped with sufficient security measures to make it last.

At the same time, it should be stressed that the currently failing democracies are essentially different from those which failed in prior waves. Nowadays, especially in Europe, democracy is no longer associated with simple majority rule, but rather with respecting minority rights. This is why the scientific and journalist publications about European political systems frequently refer to the liberal democracy and not just democracy. It seems that the failing democracies' actual problems concern exactly this component of democracy which involves observance of individual rights and freedoms; at the same time, they do not waive the Schumpeterian aspects of democracy, constituted mainly by cyclical and competitive universal elections.

Many scholars, driven by the need to understand the current transformations, undertook regular research on the processes of democratisation and de-democratisation. On one hand, monitoring the condition of democracy is a serious analytical challenge, but on the other, it offers invaluable cognitive gain, as it provides information on potential challenges and threats which may indirectly manifest in social conflicts, wars, migration crises or economic crises.

Political scientists have multiple tools to explore developments of democracy. The choice and application of the tools depend on the need to solve precise research problems. One of the theoretical concepts, which serves as a starting point for variables operationalisation in the present report, involves the liberal and authoritarian notions of democracy, as defined by Kirsch and Welzel (2019). This concept is used to monitor the condition of democracy worldwide. The quoted scholars assumed that democracy is reproduced through behaviour of individuals within the social space. Democratisation of social life is evidenced by individuals' behaviour rooted in their attitudes toward philosophical and political questions which are key for the democratic regime. The authors believed that the said attitudes are based on individuals' convictions. Relying on their observations, Kirsch and Welzel proposed to divide these convictions into two notions of democracy: Liberal Notion of Democracy (LND) and Authoritarian Notion of Democracy (AND). The liberal notion is associated with civic freedom which serves individual self-actualisation through expression in political life by way of a possibility to participate in elections. The authoritarian notion is characterised by obedience to "competent" rulers, whose authority is defended in opposition to the constitutional principle of division of power, public criticism and political competition. In this interpretative framework, domination of the liberal over authoritarian notion signals strengthening democracy in the country in question, while domination of the authoritarian over liberal notion evidences weakening democracy. Hypothetically, a similar level of the liberal and authoritarian notions is possible, too, and may reflect a stagnant or

strong social conflict blocking democratisation in the state.

## Sample

For the comparative analysis, joined databases of the World Value Survey and European Value Survey were used (EVS/WVS 2021). The original sample included 135,000 observations from a total of 82 countries. The available database was analysed and filtered, and thus key variables and indicators were obtained. The analysis led to exclusion of Turkey and Egypt which had no data concerning the diagnosed indicators of democracy. Cyprus was excluded, too, due to 50% rate of missing data for one of the democracy index indicators. Data from Denmark and the Netherlands included a half of apparent observations, as for half of their lines there were no other data than state identification. The problem was probably due to the World Value Study Association's effort to combine two different databases (WVS and EVS), in which not all indicators overlap. It was also arbitrarily resolved to exclude those observations from any country which had more than two missing data in the line. Upon filtering the identified missing data in the quantitative indicators, it turned out that they reached 1% do 3% of the entire sample, and the final sample was 122,447 (91% of the original number) observations from 79 states. Skewness of quantitative variables was verified, too, in order to identify the best method of adding missing data. The analysis showed no symmetrical distribution for most data, and therefore the median imputation for groups was applied with the respondent's country of origin used as the grouping variable.

## Method

The operationalisation of the liberal and authoritarian notion of democracy variables was based on Sokolov's empirical model (2021). The liberal and authoritarian notions of democracy are expressed by relevant indices, each calculated based on three items (summarised in Table 1). The higher index score signifies the higher intensity of the selected notion within respondents' convictions. We applied confirmative factor analysis to verify reliability and consistency and it revealed acceptable parameters of the used model ( $X^2=6811$ ,  $p<.001$ , CFI=0.942, TLI=0.892, SRMR=0.06, RMSEA=0.08).

Table 1. Structures of variables and indicators of the liberal and authoritarian notions of democracy

Indicator	Raw scale	WVS/ EVS code	Notions indicators /
Religious authorities interpret the laws.	0-against democracy	E225	Authoritarian
People choose their leaders in free elections.	10-essential characteristic of democracy	E226	Liberal
The army takes over when government is incompetent.		E228	Authoritarian
Civil rights protect people's liberty against oppression.		E229	Liberal
Women have the same rights as men.		E233	Liberal
People obey their rulers.		E233 B	Authoritarian

Source: Original development.

The intensity of the liberal and authoritarian notions of democracy was calculated for each respondent by summing up the results for particular items included in each index (for details: see Annex 1: Table 1 and Table 2). This was possible as all items were expressed with same scale (quantitative, 11 degrees, 0-10). As a result, each respondent could potentially have 30 points in each index of the liberal and authoritarian notion of democracy, respectively.

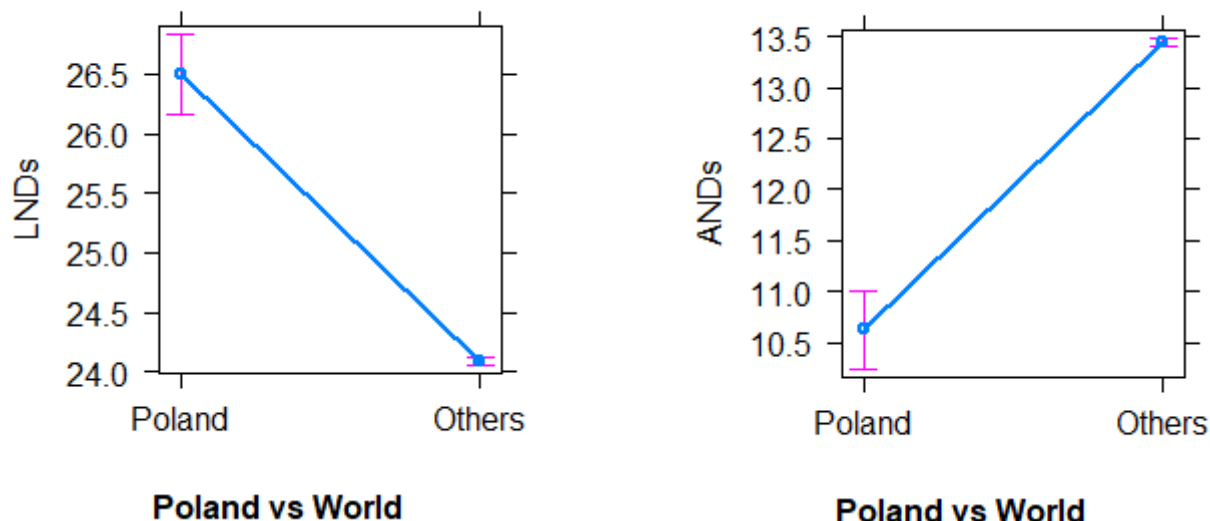
## Results

The analysis of the descriptive statistics showed the overall average score for the liberal notion of democracy for all countries included in the study at 24.25 (SD=6.05). Meanwhile, for the authoritarian notion of democracy, the score was 13.1 (SD=6.94). Thus, there is a statistically significant domination of the liberal notion of understanding democracy.

The average result for Poland in the case of the liberal and authoritarian index was 26.50 (SD=5.11) and 10.60 (SD=5.95) respectively. A comparative analysis with the generalised linear model (GLM) showed that Poland had

at average ( $\beta=-2.39$ ,  $p<.001$ ) a higher index of liberal notion of democracy as compared to the global average. The same method was used to verify the result for the authoritarian notion of democracy for Poland. The regression analysis results showed that Poland's index for the authoritarian notion of democracy was statistically significantly lower ( $\beta=-2.81$ ,  $p<.001$ ) than the global average.

Liberal and authoritarian notions of democracy -  
comparison of Poland vs. the global average based on the expected probability measures



Source: Original development

The comparative analysis of the liberal notion of democracy in individual countries (ANNEX 3, Figure 1) with a generalised linear model defining Poland as the reference category disclosed statistically significantly higher indicators of the liberal notion of democracy for: Albania ( $\beta=0.93$ ,  $p<.001$ ), Denmark ( $\beta=0.58$ ,  $p<.01$ ), Greece ( $\beta=0.49$ ,  $p<.05$ ), Iceland ( $\beta=1.04$ ,  $p<.001$ ), Germany ( $\beta=1.11$ ,  $p<.001$ ) and Sweden ( $\beta=0.88$ ,  $p<.001$ ).

An analogical analysis (ANNEX 3, Figure 2) in the case of the authoritarian notion revealed statistically significantly lower scores of the authoritarian notion index for: Albania ( $\beta=-1.69$ ,  $p<.001$ ), Austria ( $\beta=-3.93$ ,  $p<.001$ ), Australia ( $\beta=-0.87$ ,  $p<.001$ ), Bulgaria ( $\beta=-0.96$ ,  $p<.001$ ), Czechia ( $\beta=-1.42$ ,  $p<.001$ ), Denmark ( $\beta=-1.73$ ,  $p<.001$ ), Estonia ( $\beta=-1.04$ ,  $p<.001$ ), Hongkong ( $\beta=-0.42$ ,  $p<.05$ ), the Netherlands ( $\beta=-2.10$ ,  $p<.001$ ), Japan ( $\beta=-4.40$ ,  $p<.001$ ), Germany ( $\beta=-4.67$ ,  $p<.001$ ), Norway ( $\beta=-0.92$ ,  $p<.001$ ), New Zealand ( $\beta=-1.03$ ,  $p<.001$ ), Sweden ( $\beta=-0.89$ ,  $p<.001$ ), Slovenia ( $\beta=-2.00$ ,  $p<.001$ ) and Switzerland ( $\beta=-1.27$ ,  $p<.001$ ).

## Conclusions

The completed analyses allow a conclusion that among democratic values and attitudes, both globally and in Poland, those associated with the liberal notion of democracy are dominating. As compared to other countries, the Polish society ranks quite high in terms of the liberal notion of democracy, while the index of the authoritarian notion of democracy is quite low.

## Disclaimer

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## Please cite the following report as:

Błaszczyszki K., Sula P., Madej M. (2022) *Authoritarian and liberal notion of democracy – international comparative analysis considering Poland*. Centre for Quantitative Research of the Institute of Political Science, University of Wrocław. Wrocław.

The data analysis was performed using R Studio 1.3.1093. The computing algorithm used for the present report is in Annex 2.

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EVS (2021): European Values Study 2017: Ukraine (EVS 2017). GESIS Data Archive, Cologne. ZA7539 Data file Version 1.0.0, [doi:10.4232/1.13714](https://doi.org/10.4232/1.13714).

Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano J., M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2020. World Values Survey: Round Seven–Country-Pooled Datafile. Madrid, Spain & Vienna, Austria: JD Systems Institute & WVSA Secretariat. [doi:10.14281/18241.13](https://doi.org/10.14281/18241.13)

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## ANNEX 1

Table 2. Results for individual countries – liberal notion of democracy (LND)

Country	N	Mean	SD	Country	N	Mean	SD	Country	N	Mean	SD
AD	1000	26.69	3.94	FR	1798	23.08	6.34	NG	1230	22.51	6.16
AL	1358	27.43	4.06	GB	1745	25.16	4.61	NI	1200	21.53	7.13
AM	1474	21.86	5.81	GE	2014	23.47	6.49	NL	659	25.47	4.55
AR	976	25.32	4.75	GR	1180	26.98	3.86	NO	1103	26.89	3.81
AT	1602	26.64	5.62	GT	1183	20.23	6.88	NZ	1007	26.10	4.84
AU	1748	25.58	5.35	HK	2044	22.73	5.43	PE	1335	22.56	5.42
AZ	1723	24.77	5.11	HR	1447	25.10	6.35	PH	1200	20.53	6.02
BA	1678	24.94	7.18	HU	1485	25.23	5.93	PK	1964	23.92	5.86
BD	1200	26.63	4.06	ID	3159	23.52	5.54	PL	1267	26.49	5.11
BG	1453	26.30	4.69	IQ	1200	22.72	5.16	PR	1101	25.36	6.15
BO	1992	22.84	5.13	IR	1475	24.08	5.54	PT	1142	24.27	6.06
BR	1547	24.25	6.76	IS	1546	27.53	3.34	RO	2703	25.05	6.19
BY	1469	24.50	5.31	IT	2239	25.78	5.49	RS	2253	23.93	6.28
CA	4018	25.66	4.80	JO	1159	22.04	5.81	RU	3471	24.07	5.69
CH	3126	26.68	4.54	JP	1155	24.89	4.84	SE	1177	27.37	5.24
CL	927	21.69	5.93	KG	1092	22.88	8.05	SG	1928	23.44	4.98
CN	2985	25.13	5.21	KR	1245	22.40	4.02	SI	1040	25.64	4.84
CO	1520	19.51	8.02	KZ	1158	22.01	6.09	SK	1401	22.30	6.82
CZ	1666	23.67	6.03	LB	1200	21.49	6.34	TH	1445	18.85	7.32
DE	3607	27.60	4.07	LT	1346	24.99	5.22	TJ	1200	24.56	4.94
DK	1680	27.07	3.95	ME	962	21.12	6.80	TN	1178	21.40	6.83
EC	1177	20.42	6.22	MK	1053	25.21	6.00	TW	1222	25.03	4.62
EE	1197	25.95	5.53	MM	1200	24.18	5.40	UA	2708	25.62	5.23
ES	1150	24.90	5.96	MO	1015	23.16	5.89	US	2554	24.80	5.61
ET	1174	26.62	5.32	MX	1692	19.42	6.83	VN	1172	23.87	5.39
FI	1041	26.55	3.85	MY	1306	14.55	8.01	ZW	1201	24.14	6.15

Table 3. Results for individual countries – authoritarian notion of democracy (AND)

Country	N	Mean	SD	Country	N	Mean	SD	Country	N	Mean	SD
AD	1000	11.21	5.05	FR	1798	11.84	5.18	NG	1230	18.08	5.63
AL	1358	8.93	6.27	GB	1745	13.04	5.49	NI	1200	15.25	6.71
AM	1474	14.36	5.50	GE	2014	14.75	6.47	NL	659	10.17	5.17
AR	976	14.89	5.83	GR	1180	10.84	5.53	NO	1103	9.70	4.91
AT	1602	6.70	5.51	GT	1183	14.23	6.23	NZ	1007	9.60	5.24
AU	1748	9.76	5.29	HK	2044	10.21	5.36	PE	1335	15.99	5.38
AZ	1723	10.81	6.25	HR	1447	11.15	6.88	PH	1200	18.09	5.75
BA	1678	12.04	7.31	HU	1485	12.06	6.12	PK	1964	23.05	5.73
BD	1200	22.64	6.08	ID	3159	20.92	5.56	PL	1267	10.63	5.95
BG	1453	9.67	6.03	IQ	1200	18.66	5.62	PR	1101	13.67	6.99
BO	1992	15.87	5.46	IR	1475	15.89	5.86	PT	1142	12.61	5.55
BR	1547	13.25	6.68	IS	1546	10.32	4.25	RO	2703	14.64	7.31
BY	1469	13.56	5.84	IT	2239	11.96	5.43	RS	2253	11.75	6.55
CA	4018	11.70	5.79	JO	1159	18.89	5.94	RU	3471	15.97	5.62
CH	3126	9.36	4.87	JP	1155	6.23	4.09	SE	1177	9.74	5.04
CL	927	14.09	5.00	KG	1092	17.91	7.82	SG	1928	12.35	5.34
CN	2985	14.69	5.50	KR	1245	12.37	5.25	SI	1040	8.62	5.63
CO	1520	13.32	7.26	KZ	1158	17.57	6.12	SK	1401	12.97	6.36
CZ	1666	9.20	5.48	LB	1200	15.15	5.95	TH	1445	13.65	6.26
DE	3607	5.96	4.35	LT	1346	10.44	5.85	TJ	1200	20.01	6.16
DK	1680	8.90	4.93	ME	962	14.32	6.37	TN	1178	15.34	6.59
EC	1177	15.40	5.90	MK	1053	13.13	6.80	TW	1222	10.68	4.82
EE	1197	9.58	5.51	MM	1200	18.71	5.53	UA	2708	13.87	6.80
ES	1150	13.08	5.98	MO	1015	11.00	6.29	US	2554	11.94	5.61
ET	1174	19.86	7.53	MX	1692	14.37	5.94	VN	1172	19.35	5.69
FI	1041	11.28	5.08	MY	1306	17.27	6.05	ZW	1201	17.81	6.67

## ANNEX 2

### R code for replication of the results

Note: to activate the packages listed in the code, you need to instal them, unless they were installed earlier.

Link to the database: <https://www.worldvaluessurvey.org/WVSEVSjoint2017.jsp>

```
library(tidyverse)
library(haven)
library(car)
library(sjlabelled)
library(sjmisc)
library(dplyr)
library(nnet)
library(ggpubr)
library(rstatix)
library(pscl)
library(psych)
library(FSA)
library(lavaan)
library(moments)
library(effects)
library(margins)
library(ggeffects)
library(DAMisc)

##DATA PREPARATION##
#Loading, Selecting and Filtering Data base#
EWSWVS2017<-read_sav("D:/Stary dysk backup/IP/Dokumenty Cequar/ShortyBadawcze/ResearchShort1/EVS_WVS_Joint_spss_v3_0.sav")
EWVS<-select(EWSWVS2017, cntry_AN, E225, E226, E228, E229, E233, E233B)
sjmisc::frq(EWVS$E225)

#Setting NA#
EWVS<-set_na(EWVS, na= c(-1, -2, -3, -4, -5))

#Zapping of labels#
EWVS<-drop_labels(EWVS)

#Changing to data.frame#
EWVS<-as.data.frame(EWVS)

#Saving in editable format - raw data base before imputation#
write.csv(EWVS, file="D:/Stary dysk backup/IP/Dokumenty Cequar/ShortyBadawcze/ResearchShort1/EWVSraw.csv")

#Exclusion of cases which had no more than 2 NA in a row#
delete.na<-function(EWVS, n=0){EWVS[rowSums(is.na(EWVS))<=n,]}
EWVS<-delete.na(EWVS, 2)

#Summary of missing values#
TableN<-as.data.frame(sjmisc::frq(EWVS$cntry_AN))
TableNA<-EWVS %>% group_by(cntry_AN) %>%
  summarize_each(funs(sum(is.na(.))))

#Exclusion of Turkey and Egypt due to lack of data in chosen variables#
EWVS<-dplyr::filter(EWVS, cntry_AN !='TR' & cntry_AN != 'EG' & cntry_AN !='CY')

##MISSING DATA##
#skewness checking - choosing mean or median imputation#
describe(EWVS)

#Conclusion: Majority of continious variables had skewed distribution - median imputation has been applied#

#MAIN METHOD: Median Imputation by Group#
EWVS<-EWVS %>%
  group_by(cntry_AN) %>%
  mutate_if(is.numeric,
    function(x) ifelse(is.na(x),
      median(x, na.rm = TRUE),
      x))

#Saving in editable format - data base after median imputation#
write.csv(EWVS, file="D:/Stary dysk backup/IP/Dokumenty Cequar/ShortyBadawcze/EWVSimp.csv")

##ANALYSIS##
#Data transformation#
#Computing Democracy Index#
EWVS <- EWVS %>%
```

```

mutate(LNDs = (E226+E229+E233))
EWVS <- EWVS %>%
  mutate(ANDs = (E225+E228+E233B))

#Recoding PL vs Other Nations#
EWVS<-EWVS %>%
  mutate(cntry=cntry_AN)
EWVS$cntry[EWVS$cntry=='PL'] <- 'Poland'
EWVS$cntry[EWVS$cntry!='Poland'] <- 'Others'

EWVS$cntry<-is.numeric(EWVS$cntry)
EWVS$cntry<-ifelse(EWVS$cntry=='Poland',1,0)

#Confirmatory Factor Analysis - Democracy Index#
pathD<-'
  LND=~E226+E229+E233
  AND=~E225+E228+E233B'
CFA<-cfa(pathD, data=EWVS)
summary(CFA, fit.measures=TRUE)

#Descriptive Statistics#
describe(EWVS)
describeBy(EWVS$LNDs, group=EWVS$cntry_AN)
describeBy(EWVS$ANDs, group=EWVS$cntry_AN)

EWVS$cntry<-as.factor(EWVS$cntry)
EWVS$cntry<-relevel(EWVS$cntry, ref="Poland")
EWVS$cntry_AN<-as.factor(EWVS$cntry_AN)
EWVS$cntry_AN<-relevel(EWVS$cntry_AN, ref="PL")

EWVS<-as.data.frame(EWVS)

##Analysis##
#Generalized Linear Models for LND and AND Poland v non-Poland comparison#
M1.1<-glm(LNDs~cntry, data=EWVS)
summary(M1.1)
pR2(M1.1)
M1.1eff<-allEffects(M1.1)
plot(M1.1eff, main="",
      sub='Poland vs World',
      xlab="",
      Ylab=")

M1.2<-glm(ANDs~cntry, data=EWVS)
summary(M1.2)
pR2(M1.2)
M1.2eff<-allEffects(M1.2)
plot(M1.2eff, main="",
      sub='Poland vs World',
      xlab="",
      Ylab=")

#Generalized Linear Models for LND and AND Poland v other countries comparison#
M2.1<-glm(LNDs~cntry_AN, data=EWVS)
summary(M2.1)
pR2(M2.1)
M2.1eff<-allEffects(M2.1)
plot(M2.1eff, main="",
      sub='Countries',
      xlab="",
      Ylab=")

M2.2<-glm(ANDs~cntry_AN, data=EWVS)
summary(M2.2)
pR2(M2.2)
M2.2eff<-allEffects(M2.2)
plot(M2.2eff, main="",
      sub='Countries',
      xlab="",
      Ylab=")

```

