

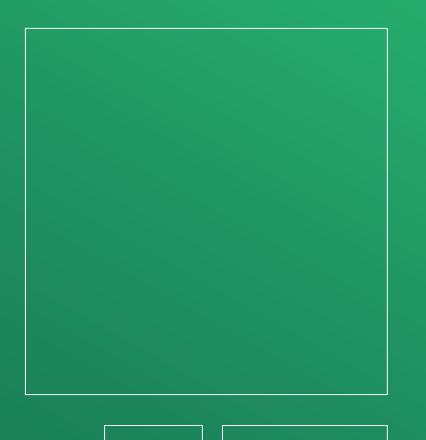
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The 2018 SEDA focus on Poland

Includes comparison with EU and ROW







Executive Summary

Intro to SEDA

SEDA 2018 analysis focusing on Poland

Overview of SEDA results

Ten year view of Poland

Ten year view of Poland vs. Peers

Good and improving well-being performance

Over the last decade (slides 11-22), Poland...

- Improved in most dimensions, most notably in infrastructure, employment, environment and income
- Has a wealth to wellbeing coefficient of 1.22 in 2018, which is well above the global average and several of its EU peers

Compared to the EU, (slides 27-31), Poland...

- Performs better in the dimensions of economic stability, employment and education, but lags behind in other dimensions
- Has made stronger relative progress across most dimensions in the past decade, particularly in employment
- Has made slightly weaker relative progress in the dimension of education

Compared to the rest of the world (slides 32-36), Poland...

- Performs better in most dimensions and is pushing ahead in income, infrastructure, civil society and health
- Has made weaker relative progress in education, equality, governance and economic stability over the last decade

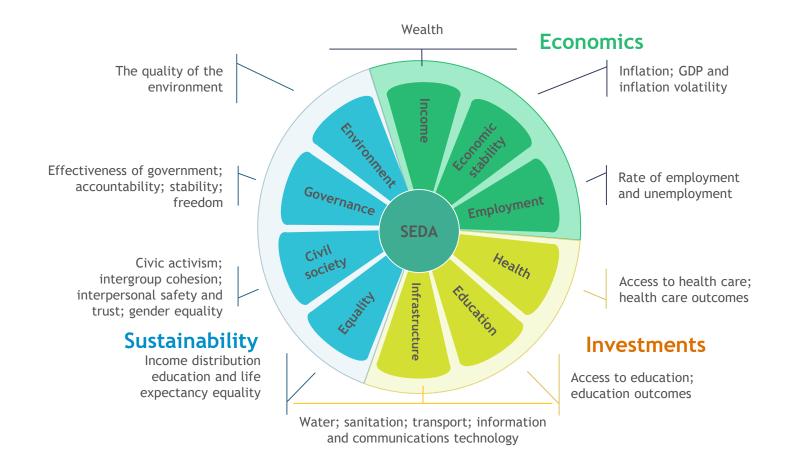
Poland has made significant improvements across the

dimensions of well-being in the past decade and is a top performer in its ability to convert wealth into wellbeing

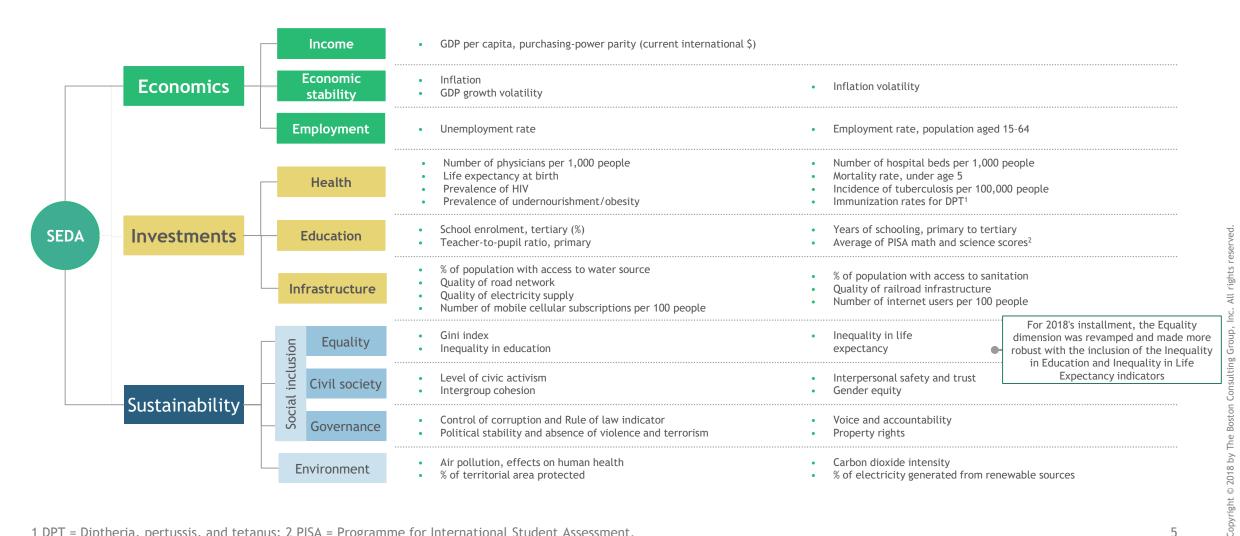


Intro to SEDA

SEDA Assesses Relative Well-being In Three Dimensions Comprised of 10 Dimensions



SEDA dimensions use 40 indicators - chosen to best characterize the dimensions without overlaps and capture differences across countries



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SEDA facilitates analysis of well-being in three different ways



SEDA's time horizons

Current Level (CL)

Change in Current Level (CL Change)

Wealth to wellbeing coefficient (WWBc)

Definition

- Relative measure of a country's socioeconomic development based on 40 indicators normalized on a 0-100 scale. Besides the overall "SEDA" score, current level scores are calculated for 10 dimensions.
- Compares the initial and latest CL scores for a given period. For SEDA 2018 scores the change covers a 10-year period (based on data from 2007 to 2016). CL change is calculated overall and at the dimension level. Change is analysed both in terms of absolute score change and percentage change.

• Relative measure of a country's performance in converting wealth into well-being. Measures the difference between the SEDA CL score and the CL score that a country would be expected to have given its per capita income and the global average (coefficient = 1.0) relationship between income and CL score.

SEDA is a powerful way to asses and develop policies to increase a country's well-being

- Every government's ultimate customers are its citizens the individuals for whom a country's socio-economic state needs to translate to tangible wellbeing benefits
- GDP cannot offer an adequate view on wellbeing, SEDA does, as it goes beyond economic indicators
- Since 2012, BCG has developed SEDA to support public policy makers, development organizations and other strategic decision makers make well-informed decisions to maximize citizen's well-being
- SEDA proposes a relative measure of well-being based on three elements Economic, Investments, and Sustainability that encompass 10 dimensions, represented by 40 publically available indicators
- SEDA offers a current snapshot of well-being, a measure of progress over time, and additionally it tells how well a country converts its wealth into well-being relative to other countries providing a robust assessment on strengths and weaknesses
- Methodologically consistent SEDA scores and coefficients were calculated with 10 years worth of data for the 2018 report the indicators used were chosen to best characterize the dimensions without overlaps and capture differences across countries
 - In the 2018 installment, the Equality dimension was made more robust with the inclusion of the Inequality in Education and Inequality in Life Expectancy indicators
 - SEDA doesn't include subjective indicators but the strong correlation with the World Happiness Index suggests that improvements in SEDA well-being scores are reflected in subjective indexes
- Analyses are based on all 152 countries although charts usually highlight the Global Powerhouses 36 countries comprised of 25 biggest economies and 25 most populous countries representing 87% of the world's economy and 78% of the world's population?

SEDA was developed to help public sector stakeholders develop actionable socioeconomic dev. strategies

SEDA

An approach to assess and compare each country's levels of socio-economic development across a broad range of dimensions

Assessment



Assesses how well countries are translating their wealth into Well-being

Compares SEDA scoring with countries' GDP level

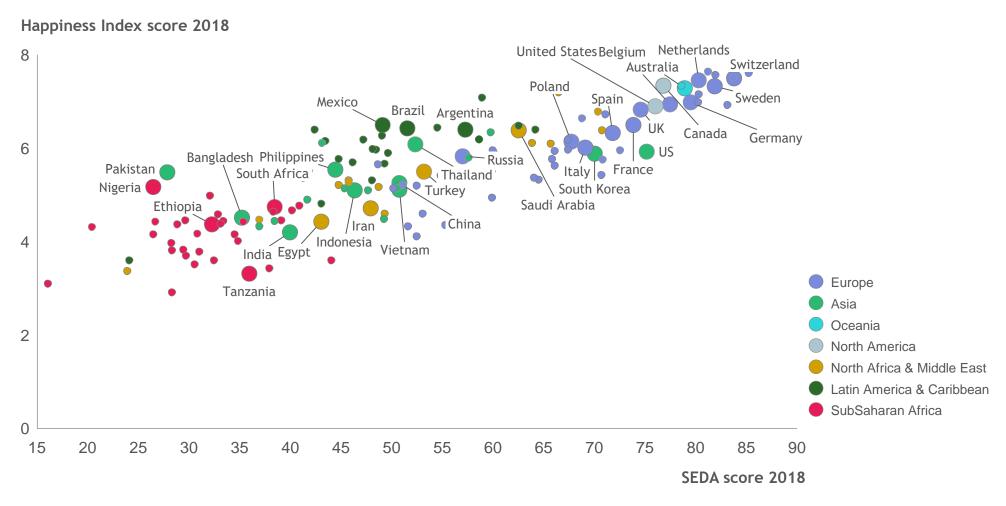
Provides a benchmark for countries to compare themselves against their peers

Ability do deep dive across 10 dimensions of development

• e.g. Health, Infrastructure, Government, Institutions...

Provides valuable insight for governments, public policy makers, development organizations and international corporations with global presence

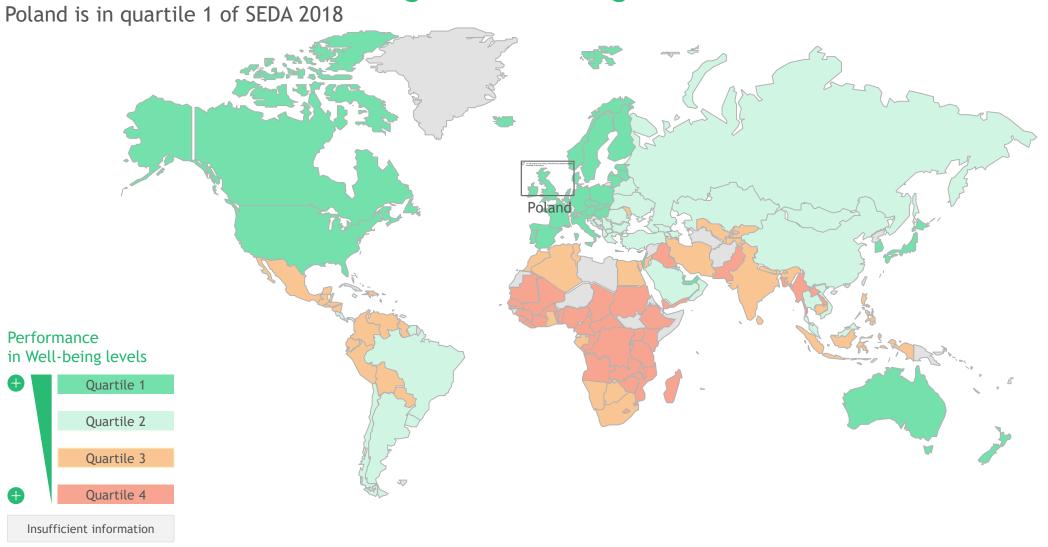
SEDA does not use subjective indicators but SEDA scores are broadly in line with subjective-based measures such as the Happiness Index





SEDA 2018 analysis focus on Poland

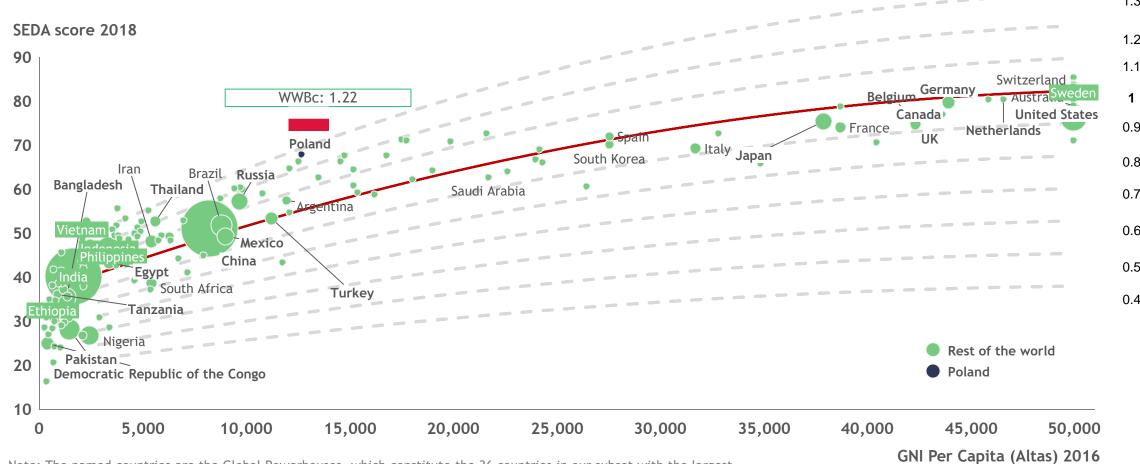
Wealthier countries show higher well-being levels



Source: SEDA 2018; BCG Analysis

Poland is above average at converting wealth into well - being





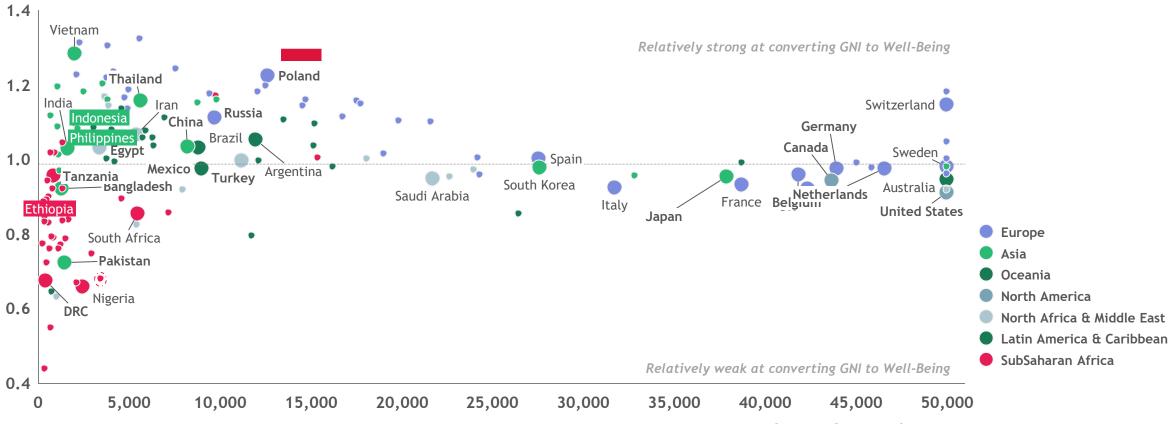
Note: The named countries are the Global Powerhouses, which constitute the 36 countries in our subset with the largest populations (top 25) and/or the largest economies (top 25).

Source: SEDA 2018; BCG Analysis

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Wealth to Well-being conversion varies even at similar income levels

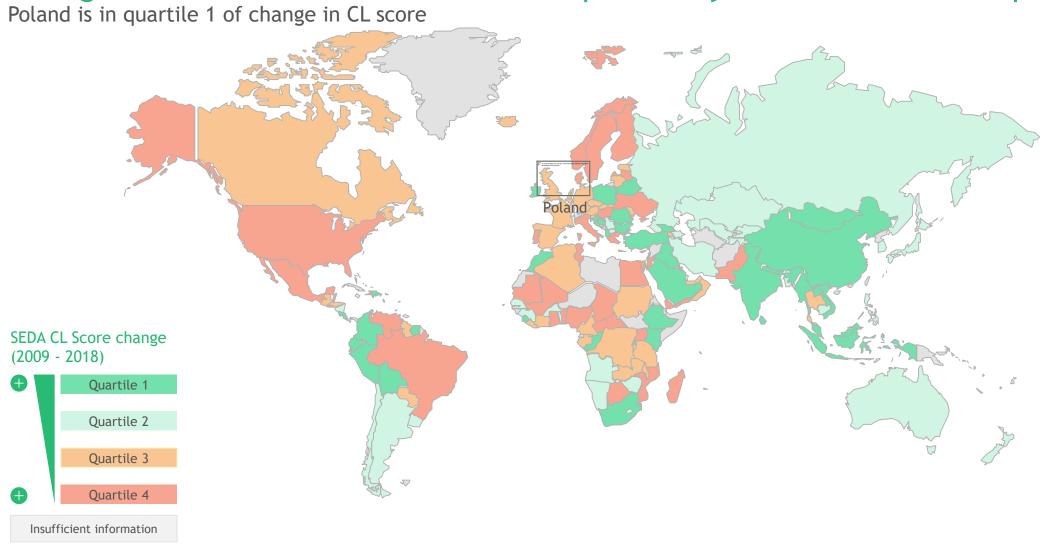
Wealth-to-Wellbeing coefficient 2018



Note: The named countries constitute the 36 countries in our subset with the largest populations (top 25) and/or the largest GNI Per Capita (Altas) 2016 economies (top 25); larger bubble sizes are Global powerhouses, smaller bubble sizes are rest of the world

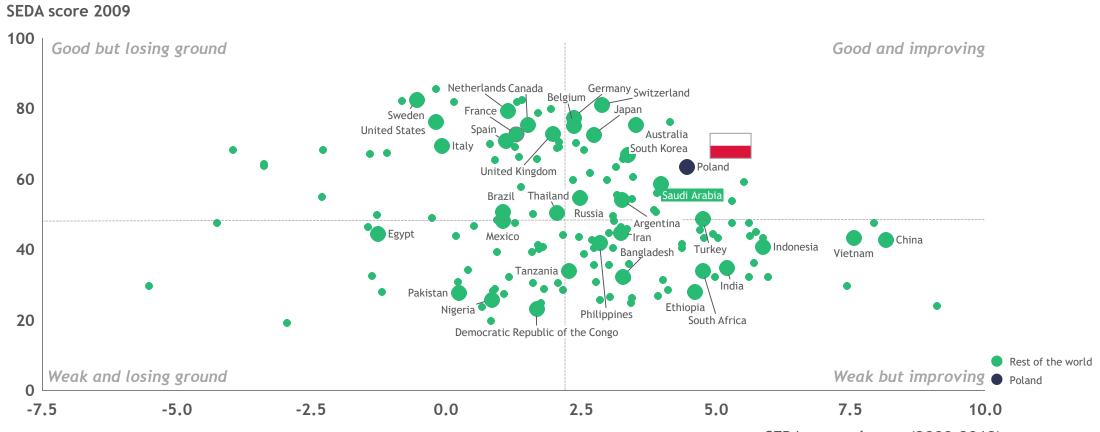
Source: SEDA results 2018

Change in current level scores over the past ten years shows a mixed picture



Source: SEDA 2018; BCG Analysis

Overall, Poland's well being performance is good and improving



Note: The named countries constitute the 36 countries in our subset with the largest populations (top 25) and/or the largest **SEDA score change (2009-2018)** economies (top 25); larger bubble sizes are Global powerhouses, smaller bubble sizes are rest of the world

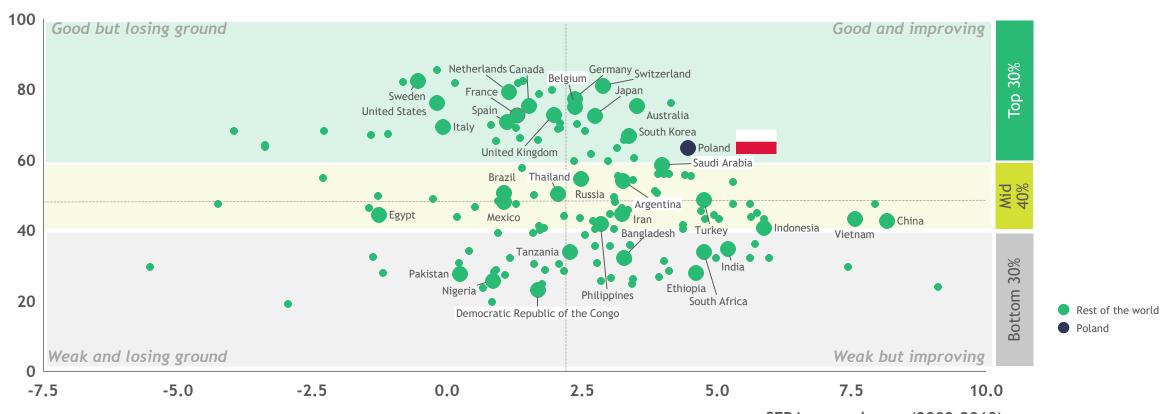
Source: SEDA results 2018



10 years view of Poland

In 2009, Poland was in Top 30% of SEDA well-being scores

SEDA score 2009

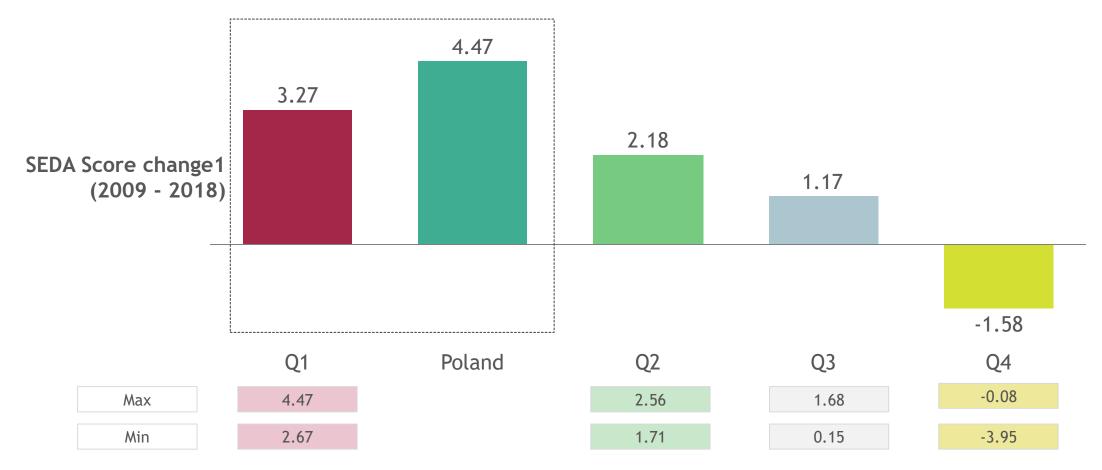


Note: The named countries constitute the 36 countries in our subset with the largest populations (top 25) and/or the largest **SEDA score change (2009-2018)** economies (top 25); larger bubble sizes are Global powerhouses, smaller bubble sizes are rest of the world

Source: SEDA results 2018

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Of countries with a similar starting level of well-being, Poland is in the 1st quartile of change

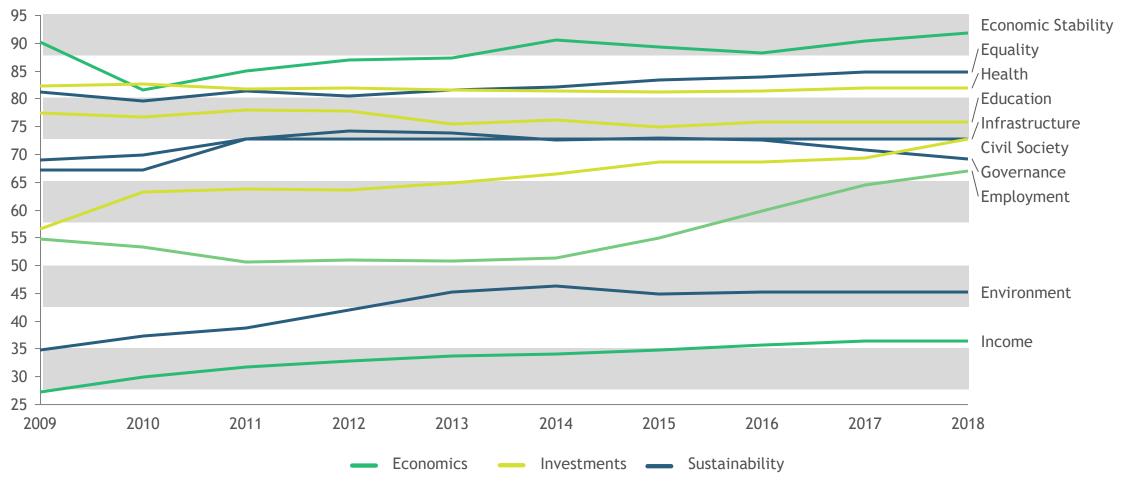


^{1.} Number depicted for quartiles is average SEDA score change Note: Similar starting level includes countries in Top 30% of SEDA 2009

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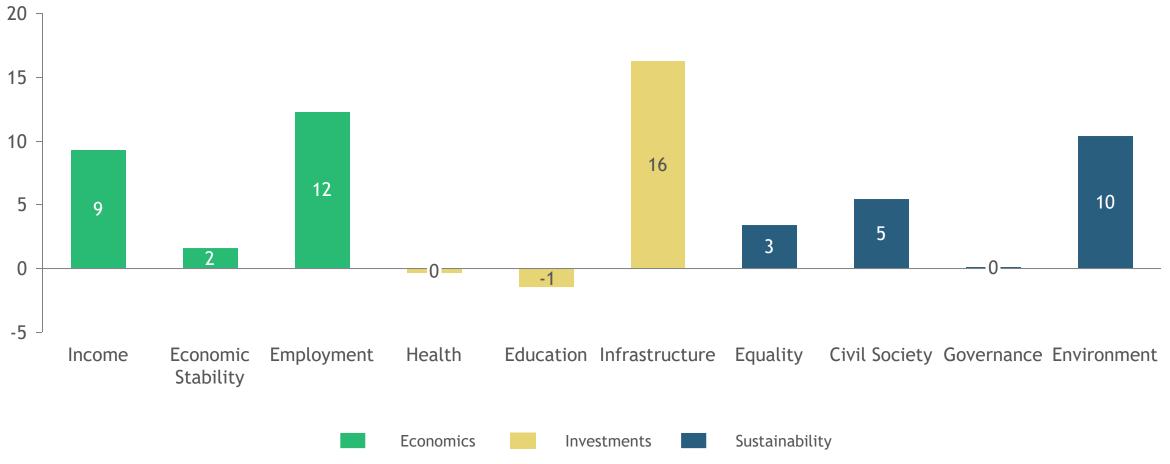
Most dimensions witnessed an improvement in the past ten years

Evolution of Current Level scores



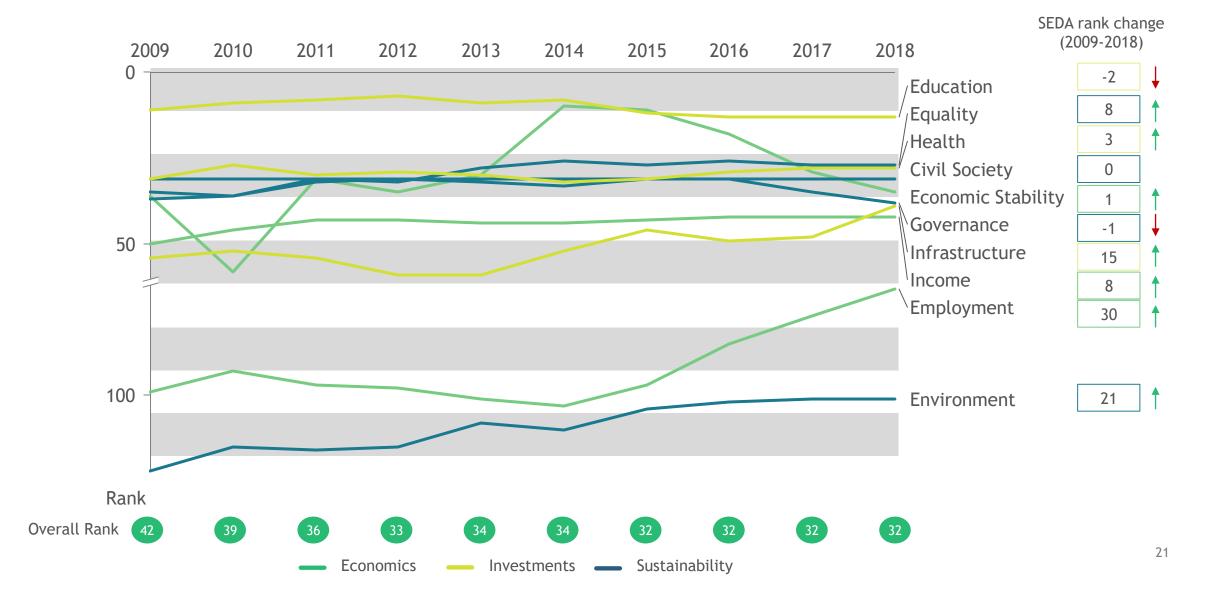
In the past decade, Poland improved in most dimensions, most notably in infrastructure, employment, environment and income

Change in Current level score (2009-2018)



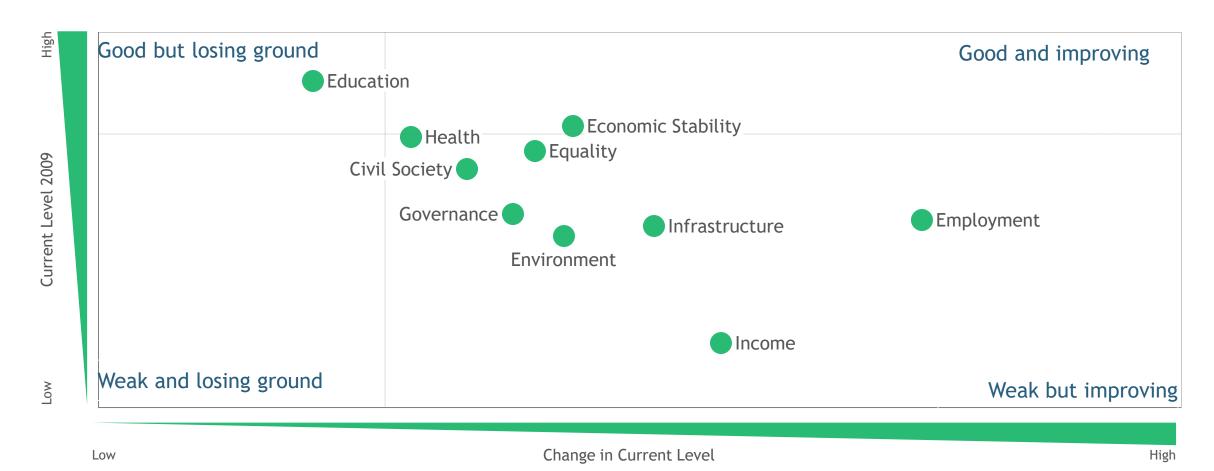
Source: SEDA Model 20

Evolution of Poland's rank across the dimensions of well-being



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Compared to those with a similar starting level, Poland is improving and catching up in most dimensions, but is losing ground in education



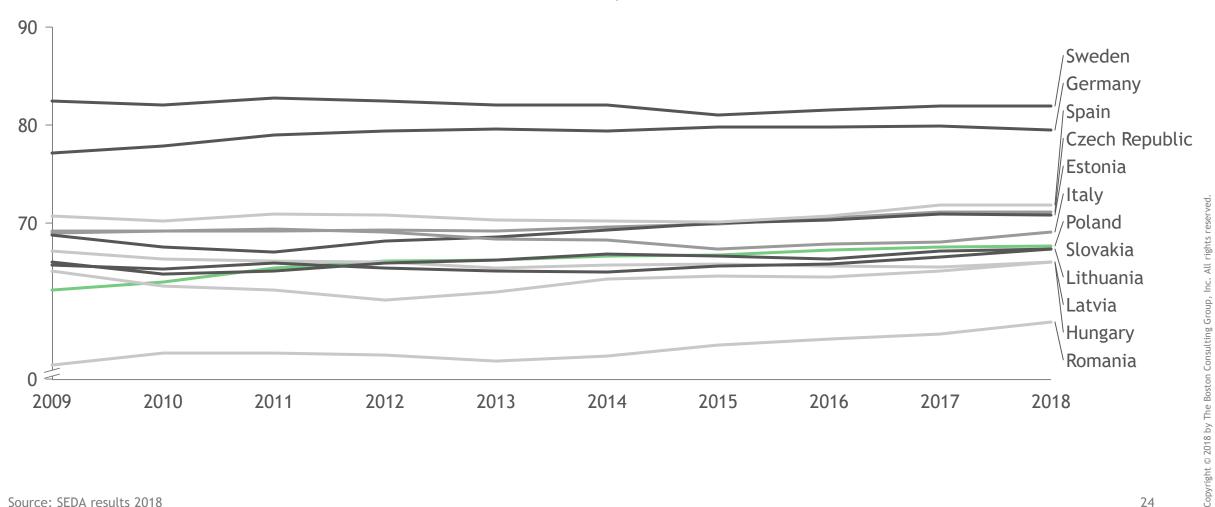
Note: Similar starting level includes countries in top 30% of SEDA 2009 Source: BCG analysis; SEDA scores



10 years overview of Poland vs. Select EU Peers

Evolution of overall Current Level scores of Poland and its select EU peers

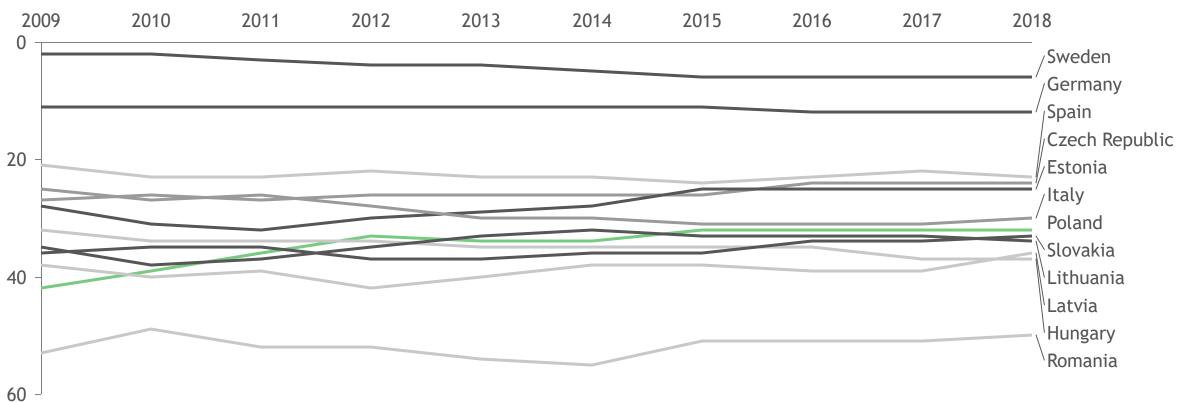
Evolution of overall Current Level scores of Poland and select peers



Source: SEDA results 2018

Evolution of overall rank of Poland and its select EU peers

Evolution of overall rank of Poland and select peers

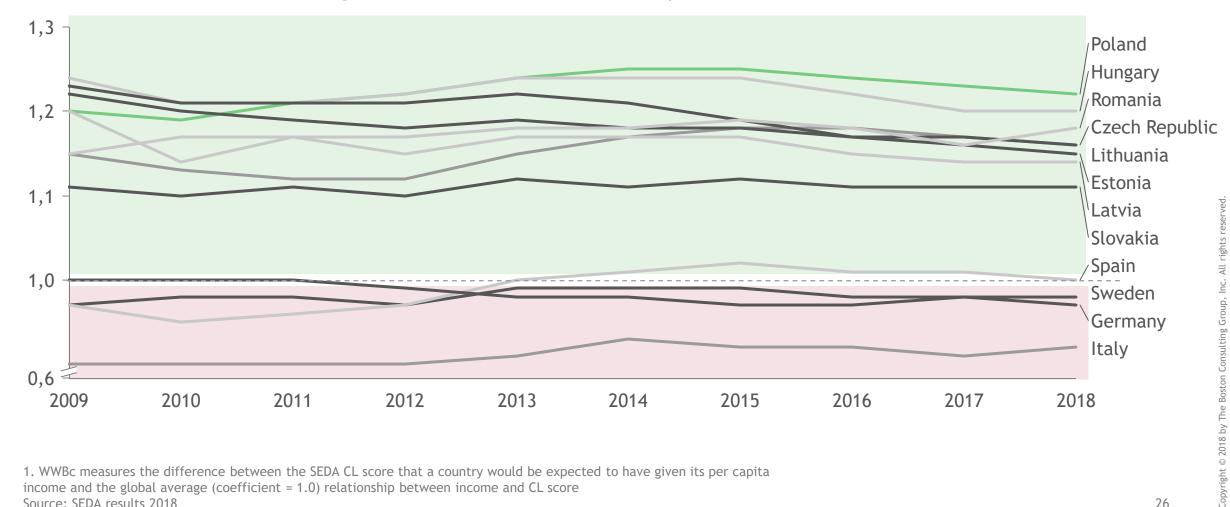


Source: SEDA results 2018

25

Poland is a top performer when it comes to converting wealth into wellbeing amongst its select EU peers

Evolution of Wealth to Well-being coefficient of Poland and select peers



^{1.} WWBc measures the difference between the SEDA CL score that a country would be expected to have given its per capita income and the global average (coefficient = 1.0) relationship between income and CL score Source: SEDA results 2018



10 years view of Poland vs. FU

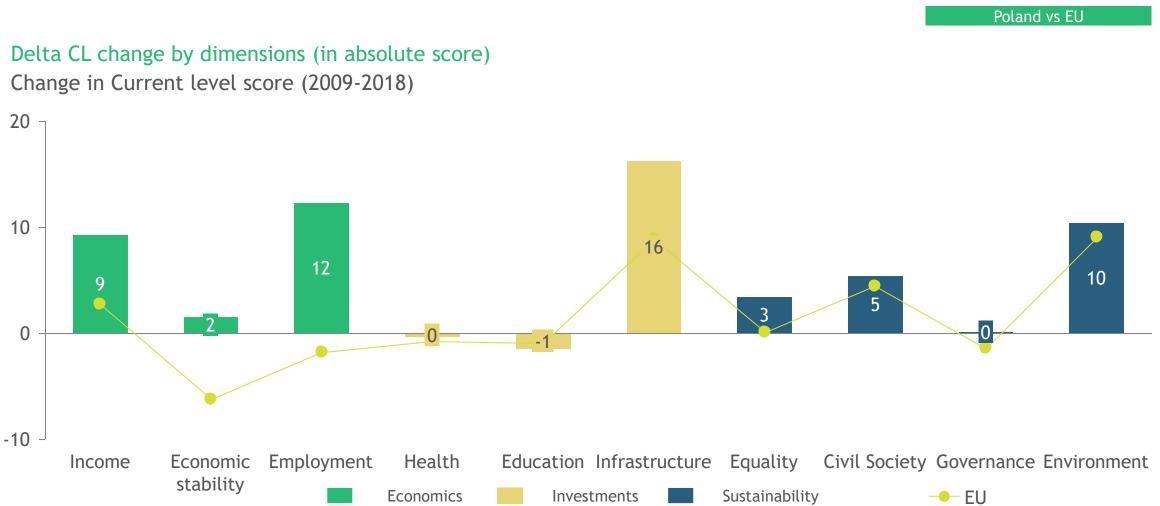
Poland performs better than the EU in dimensions of economic stability, employment and education, but lags behind in other dimensions

Current Level SEDA scores by dimensions

Poland vs EU 2018 Current Level 100 80 60 92 85 40 76 73 69 67 45 20 36 Economic **Employment** Health Education Infrastructure Equality Civil Society Governance Environment Income stability -- EU Sustainability **Economics** Investments

Source: SEDA Model Used average score for EU

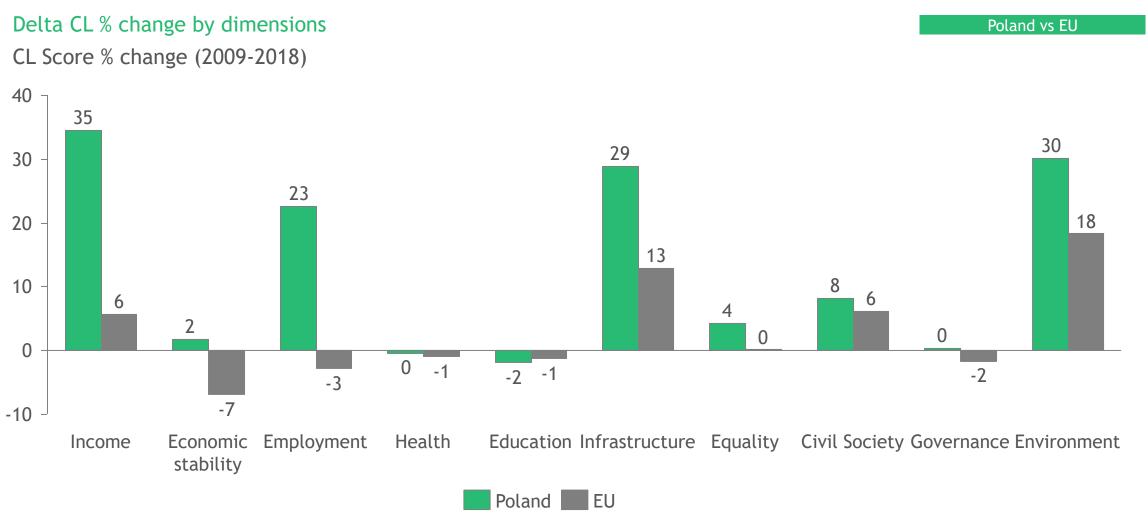
Compared to its EU peers, Poland is making stronger progress across most dimensions, particularly employment



Source: SEDA Model Used average score for EU Copyright © 2018 by The Boston Consulting Group, Inc. All rights reserved

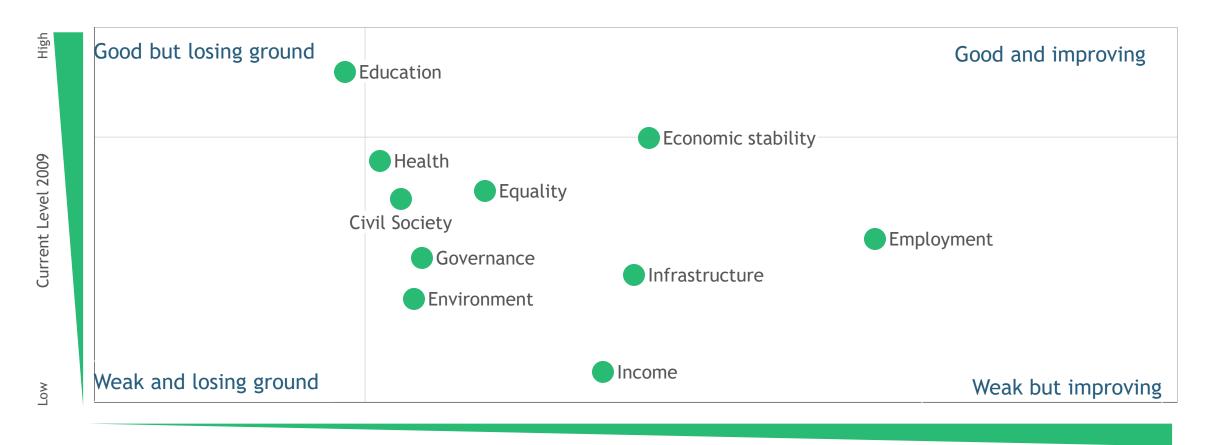
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In percentage change terms, Poland is making considerably stronger progress in income and employment, but is slightly lagging in education progress



Source: SEDA Model Used average score for EU

Compared to the rest of the EU, Poland is improving in most dimensions, but is slightly losing ground in education



Source: BCG analysis; SEDA scores

Low

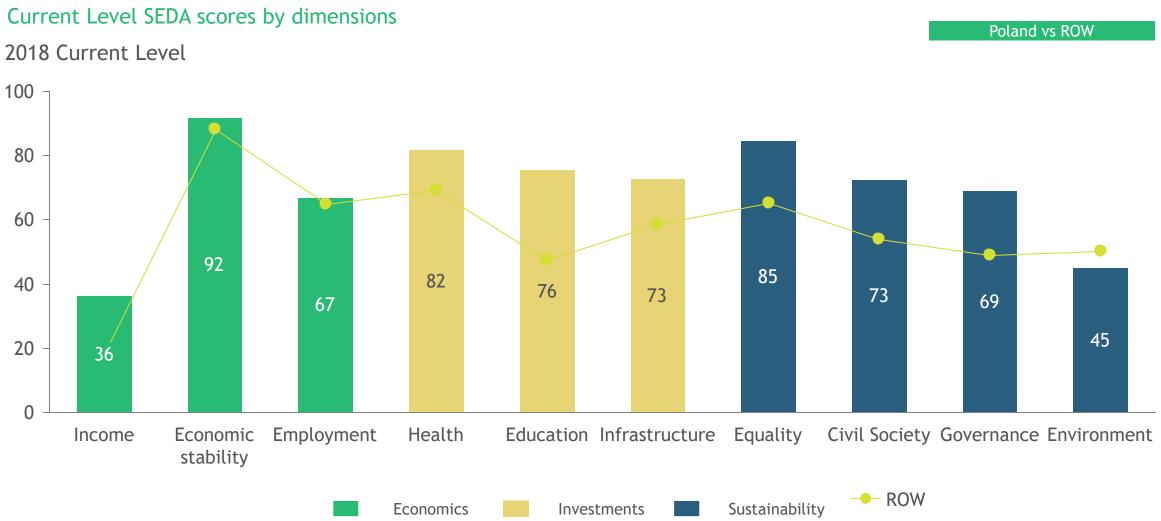
Change in Current Level

High



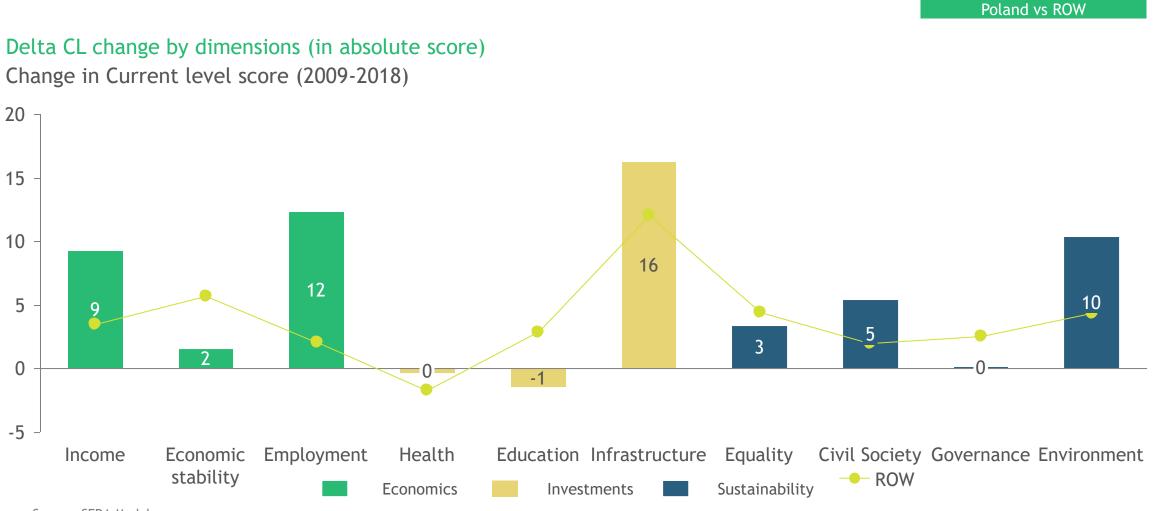
10 years view of Poland vs ROW

Poland performs better than ROW in all dimensions, except environment



Source: SEDA Model Used median score for ROW

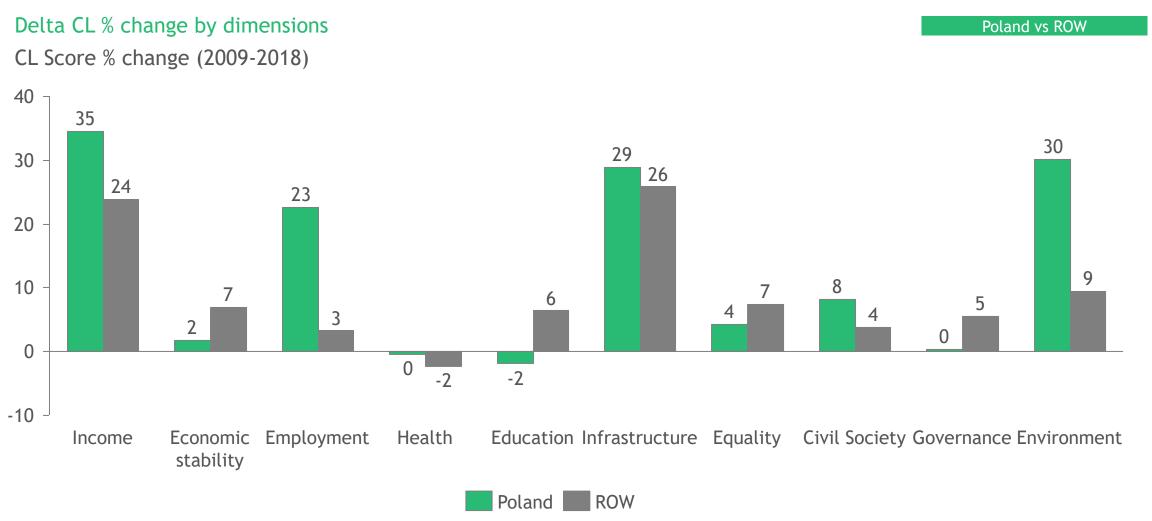
Compared to the ROW, Poland is making stronger progress in several dimensions, most notably in income, employment, infra, civil society and environment



Source: SEDA Model Used median score for ROW Copyright © 2018 by The Boston Consulting Group, Inc. All rights reserved

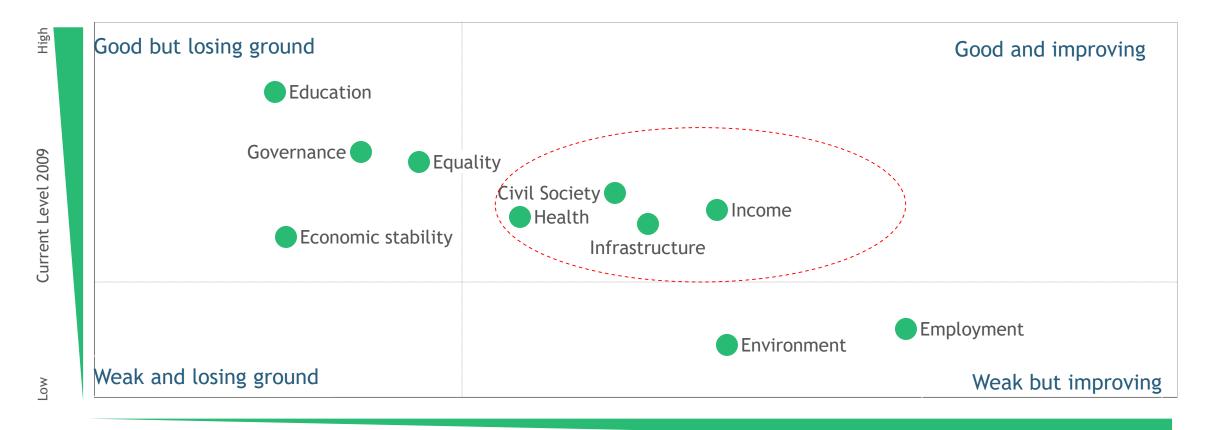
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In percentage change terms, Poland is making considerably stronger progress in employment, but lagging in econ stability, education and governance progress



Source: SEDA Model Used median score for ROW

Compared to ROW, Poland is pushing ahead in income, infrastructure, civil society and health



Change in Current Level

Low

Source: BCG analysis; SEDA scores 36

High

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List of indicator Values for selected country

Dimension	Indicator	2018	2009
Income	GDP per capita, PPP (current international \$)	27,811	19,266
Economic Stability	Inflation, average consumer prices (percentage change)	1.91	3.45
Economic Stability	Inflation volatility (sdev)	1.90	2.58
Economic Stability	GDP growth volatility (sdev)	0.01	0.01
Employment	Unemployment, total (% of total labor force)	5.10	8.20
Employment	Employment rate, population aged 15-64 (%)	65.68	60.15
Equality	GINI index (1 to 100)	32.10	33.60
Civil Society	Level of civic activism (0-1)	0.55	0.54
Civil Society	Interpersonal safety and trust index (0-1)	0.50	0.48
Civil Society	Intergroup cohesion measure (0-1)	0.75	0.62
Civil Society	Level of gender equality (0-1)	0.89	0.77
Governance	Corruption and rule of law indicator (0-100)	0.71	0.54
Governance	Political Stability and Absence of Violence/Terrorism (-2.5 to 2.5)	0.51	0.94
Governance	Voice, accountability indicator (0-100)	0.84	1.03
Governance	Property Rights Index (0-100)	61.00	50.00
Education	School enrollment, tertiary (% gross)	68.11	70.80
Education	Years of schooling primary to tertiary (Years)	16.14	15.13
Education	Teacher-pupil ratio, primary	0.10	0.10
Education	Average of math and science score	1,005.90	1,002.87
Health	Life expectancy at birth, total (Years)	78.20	75.69

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List of indicator Values for selected country

Mortality rate, under age 5 (per 1,000 live births)	4.70	6.30
Prevalence of HIV, total (% of population ages 15-49)	0.41	0.32
Incidence of tuberculosis (per 100,000 people)	19.00	23.00
Population either undernourished or obese (%)	25.60	17.97
Immunization (% measles and DPT of children)	97.00	98.50
Physician density (per 1,000 people)	2.27	2.14
Hospital beds (per 1,000 people)	6.50	6.70
Air pollution, effects on humans (0-100)	70.7	72.8
Terrestrial and marine protected areas (% of total territorial area)	29.31	17.54
Carbon dioxide intensity (kg per kg of oil-equivalent energy use)	3.04	3.16
% of electricity generation from renewables (excluding hydro source)	12.69	4.17
Internet users (per 100 people)	73.30	58.97
Mobile cellular subscriptions (per 100 people)	146.21	117.32
Quality of roads network (1-7)	4.10	2.06
Quality of Railroads infrastructure (1-7)	3.60	2.89
Improved water source (% of population with access)	98.30	97.50
Improved sanitation facilities (% of population with access)	97.20	93.50
Quality of Electricity Supply (1-7)	5.50	5.30
Inequality in education (%)	5.40	7.10
Inequality in life expectancy (%)	5.20	6.40
GNI per capita, Atlas method (current US\$)	12,680.00	12,540.00
	Prevalence of HIV, total (% of population ages 15-49) Incidence of tuberculosis (per 100,000 people) Population either undernourished or obese (%) Immunization (% measles and DPT of children) Physician density (per 1,000 people) Hospital beds (per 1,000 people) Air pollution, effects on humans (0-100) Terrestrial and marine protected areas (% of total territorial area) Carbon dioxide intensity (kg per kg of oil-equivalent energy use) % of electricity generation from renewables (excluding hydro source) Internet users (per 100 people) Mobile cellular subscriptions (per 100 people) Quality of roads network (1-7) Quality of Railroads infrastructure (1-7) Improved water source (% of population with access) Improved sanitation facilities (% of population with access) Quality of Electricity Supply (1-7) Inequality in education (%) Inequality in life expectancy (%)	Prevalence of HIV, total (% of population ages 15-49) Incidence of tuberculosis (per 100,000 people) Population either undernourished or obese (%) Immunization (% measles and DPT of children) Physician density (per 1,000 people) Air pollution, effects on humans (0-100) Terrestrial and marine protected areas (% of total territorial area) Carbon dioxide intensity (kg per kg of oil-equivalent energy use) Internet users (per 100 people) Quality of roads network (1-7) Quality of Railroads infrastructure (1-7) Improved water source (% of population with access) Inequality in education (%) Inequality in life expectancy (%) Output Description ages 15-49 19.00 19.00 19.00 25.60 19.00 25.60 25.60 25.60 25.60 27.00 29.31 Carbon dioxide intensity (kg per kg of total territorial area) 29.31 Carbon dioxide intensity (kg per kg of oil-equivalent energy use) 3.04 % of electricity generation from renewables (excluding hydro source) 12.69 Internet users (per 100 people) 73.30 Mobile cellular subscriptions (per 100 people) 146.21 Quality of Railroads infrastructure (1-7) 3.60 Improved water source (% of population with access) 98.30 Improved sanitation facilities (% of population with access) 97.20 Quality of Electricity Supply (1-7) 5.50 Inequality in education (%) 5.40 Inequality in life expectancy (%)