

# **An Index of Social and Economic Well-being across 32 OECD countries - 2006 to 2016**

(including England, Scotland,  
Wales and Northern Ireland)

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## Index of Social and Economic Well-being

### Executive Summary

- The Index of Social and Economic Well-being (ISEW), is a new measure that incorporates four of the most essential elements of well being: income; education; longevity; and inclusivity.
- The Index allows for a comparison of the relative progress of 32 OECD countries (including the four constituent countries of the UK) to be made across the decade from 2006 to 2016.
- Results show that over this period 5 of the top 6 performing countries stayed the same (**Switzerland, Norway, Iceland, Netherlands and Canada**) while Finland was replaced by **Japan**.
- Similarly, 4 of the bottom 6 performing countries stayed the same (**Greece, Hungary, the Slovak Republic and Poland**) while Estonia and Portugal were replaced by the **Czech Republic and Wales**.
- The biggest rises in overall Index scores across the decade were seen in Eastern European countries (**Poland and Estonia**), although in most cases starting from a low base and so having little impact on their overall ranking.
- Other countries doing well included **Germany and Japan**.
- 5 countries experienced falls in their overall Index scores: **Greece, Scotland, Wales, Finland and Northern Ireland**.
- The data covers a period when UK devolution has become well embedded, with time for devolved policies to be fully implemented, and the results do not suggest that this has led to an improved performance, if anything the opposite.
- While the rankings of the **UK (and England)** did not change, remaining a little above mid-table, the rankings of Scotland, Wales and Northern Ireland all fell over the decade.
- In the case of **Scotland** this fall was due to a worsening education performance, exacerbated by falling income levels associated with the decline in North Sea related activity. Furthermore, Scotland's very poor life expectancy performance failed to improve, in relative terms, over the decade.
- In the case of **Wales** the fall was also due to worsening education and GDP p.c. performances.
- In the case of **Northern Ireland** the fall is primarily related to a poor GDP p.c. performance.
- This result does not mean that devolution has proved to be a bad thing, there are many other areas of life where it will have impacted in stronger ways, but it does highlight that greater political devolution alone does not equate to growing prosperity in these key areas.
- In Scotland's case, while it is the economy and education that have led to the drop in ranking, it could be argued that poor health remains Scotland's biggest drawback and challenge. This is not a criticism of the performance of the NHS in Scotland but reflects more on the, difficult to address, lifestyle and preventative health issues involved.

## Introduction

The Index of Social and Economic Well-being (ISEW) allows a comparison to be made across countries, and over time, in relation to a quartet of key measures of economic and social success:

- financial prosperity, as measured by GDP per capita;
- educational ability, as measured by OECD PISA scores;
- general health, as measured by life expectancy;
- economic participation, as measured by the employment rate.

Clearly this list excludes a number of areas which might be considered important, for example in relation to the environment and a more explicit link to inequality. However, they do capture four of the most essential elements of well being: income, education, longevity and inclusivity. Furthermore they are a step forward in comparison to the more commonly used success measure of GDP alone.

The time period covered by the Index is the decade between 2006 and 2016, a period of great economic upheaval (including the financial crisis and highly erratic oil market) where GDP and employment are known to have fluctuated greatly over time and across countries.

The Index allows for a judgement to be made on how countries have dealt with this tumultuous time, not just in terms of economic impacts but also on wider, often more government influenced, areas of social well-being.

Have the likes of Iceland, Ireland, Spain and Greece seen the greatest (relative) falls in overall well-being or have other countries, less in the headlines, fared worse?

Within the UK, how has a decade of mature political devolution impacted on the performance of the constituent countries?

Of course it is not just governments that will have impacted on a countries performance, but also the private sector, in terms of the economy in particular, and individual tastes and decisions, in terms of longevity. As such these results should be interpreted as a wider judgement on each countries performance rather than as simply a reflection of the government's performance.

The remainder of this report looks at (i) how the Index has been compiled and (ii) the results, both disaggregated across the four measures and aggregated into an overall score and cross country rankings.

## **How the Index is compiled**

### **Components**

The ISEW comprises of four components:

- GDP per capita (standard of living), using the PPP adjusted, current price, measure.
- School age attainment levels (standard of education), using OECD PISA scores;
- Life expectancy at birth (standard of health);
- Employment rate (degree of economic participation).

In each case (with the exception of the UK constituent countries) the data source is the OECD database and the period covered is 2006 to 2016, for GDP p.c. and the employment rate, and to 2015, for PISA scores and life expectancy.

For UK constituent countries data sources are:

- PISA for school education scores;
- ONS for life expectancy data to 2014, this is extended to 2015 in each case by the same change seen in OECD data for the UK;
- ONS data on regional GVA is available to 2015 for England, Wales and Northern Ireland. The data is extended to 2016 in each case by assuming that the same ratio applies (vs the UK GVA p.c.) in 2016 as in 2015. For Scotland the data is inclusive of North Sea GVA and is taken from the latest QNAS publication.
- ONS for employment rates to 2016.

### **Methodology**

The methodology used involves:

- Indexing each of the four components using Maximum and Minimum values from across the 32 countries, based on both 2006 and 2016;
- Having normalised the four different measures, they are then simply added together. (Such an approach is akin to the methodology used for compiling the UN Human Development Index.);
- This leads to a possible range of outcomes stretching from 4 (where a country records the highest value in each of the 4 measures) to 0 (where a country records the lowest value in each of the 4 measures).

This methodological technique concentrates on changes in the differences seen across countries, which allows for differentiation between countries which would otherwise seem to have quite similar outcomes.

For example, if life expectancy varied between 76 and 80 for all countries (i.e. by only around 5% overall) then this technique, by taking the bottom of the range (76) as given, highlights who does best beyond that and the degree to which they excel.

As such, it emphasises that, while all countries may be doing well and improving over time, some countries have managed to find ways of eking out extra income or extra years of life, in comparison to others and despite experiencing similar environments.

## Countries

There are 32 countries included in the Index, comprising:

- All OECD countries, except: Chile, Israel, Ireland, Latvia, Luxembourg, Mexico and Turkey (i.e. 28 in all);
- Plus 4 UK constituent countries (England, Scotland, Wales, Northern Ireland).

The rationale for omitting the countries mentioned is:

- In the case of Mexico, Turkey, Chile, Latvia and Israel, their inclusion overly distorts the results for the other countries. In each case this is because the very low scores seen across some measures results in an undue narrowing of results for all the other countries and this narrow range effectively reduces the impact of the measure in the Index as a whole;
- In the case of Luxembourg, a similar argument applies but this time as its GDP per capita is so elevated. Furthermore, this high score is known to be distorted by the degree of cross border day migration from surrounding countries;
- In the case of Ireland, the behaviour of multinational companies has badly distorted GDP (and GNI data) in recent years. For example, in 2015 alone Irish GDP grew by over 35%. Based on this data, Ireland would have a higher GDP per capita than even Norway or Switzerland. This is clearly a distorted result, and by a big margin, leading to Ireland being omitted from the Index.

### Note on Ireland

Ireland's implicit rise in the Index rankings stems from a large improvement in GDP per capita. However, this improvement is based on the distortionary behaviour of multinational companies. This problem has been identified by the Irish Government who have introduced an alternative measure of economic activity ('modified GNI') to attempt to take this into account. As such this improvement should be seen as a false position and so Ireland has been excluded from the results.

## Caveats

There are a number of caveats to bear in mind when interpreting this report.

- 1) While the OECD make every effort to ensure consistency across the data, there will inevitably be a degree of inconsistency in places.
- 2) The movement between 2006 and 2016 will not have been a smooth path. This period covers the Great Recession and therefore ups and downs will have occurred over the decade shown.
- 3) Where scores are very similar then performance can be assumed to be very similar and any shift in the rankings are less relevant. Equally where large gaps exist between one ranking and the next then a large rise in a country's Index score may not be met by a similarly large change in its ranking (e.g. Poland in Table 1).
- 4) While some problems with the data have been identified (e.g. in relation to Irish GDP), without sufficient 'local knowledge' for each country, others may have been missed.
- 5) It is difficult to be precise about what any difference in scores between countries represents. However an indication can be given. For example, the spread across the life expectancy is just over 8 years and so a shift of 0.1 is equivalent to around 0.8 years. Similarly a shift of 0.1 in GDP per capita is equivalent to around \$3,500.

## Results

Table 1 shows the main results in terms of aggregated scores and rankings (see also Chart 1), while Charts 2 to 5 illustrate the disaggregated scores across each of the 4 measures.

### In overall terms

- 5 of the top 6 performing countries stayed the same (Switzerland, Norway, Iceland, Netherlands and Canada) while Finland was replaced by Japan.
- 4 of the bottom 6 performing countries stayed the same (Greece, Hungary, the Slovak Republic and Poland) while Estonia and Portugal were replaced by the Czech Republic and Wales.
- The biggest rises in overall Index scores across the decade were seen in Eastern European countries (Poland and Estonia), although in most cases starting from a low base and so having little impact on their overall ranking.
- Other countries doing well included Germany and Japan.
- 5 countries experienced falls in their overall Index scores: Greece, Scotland, Wales, Finland and Northern Ireland.
- In general terms it might be said that:
  - Nordic countries continue to do well;
  - Eastern European countries still lag behind but most are catching up fast;
  - Mediterranean countries have suffered the most during this decade, with the lower income EU members (Portugal, Spain, Italy and Greece) most affected.

### Measure by Measure

#### Income (GDP per capita), see Chart 2

#### Change in performance

After Greece, the poorest performing countries were Northern Ireland, Scotland and Wales and Spain and Portugal. While the presence of Scotland in this list may not be too surprising, given the impact that declining North Sea activity has had on GDP, the poor showings for Wales and Northern Ireland are more surprising (see below for further discussion).

The best performers were Switzerland and Germany.

#### Overall Performance

The highest ranking countries continue to be Switzerland, Norway and the USA.

The lowest ranking countries continue to be dominated by Eastern European countries like Poland, Hungary and the Slovak Republic, but these have now been joined by Greece.

*(Note that the GDP p.c. PPP adjusted current price measure is used here, although a constant price equivalent is also available. The latter adjusts for changes in relative prices, which can be advantageous, but by doing so also omits the impact on a country like Norway of the fall in the oil price. In most cases the use of constant price instead of current price PPP's has little impact on the overall rankings, shifting them by 2 places at most.)*

## Education (PISA results), see Chart 3

### Change in Performance

The biggest fall in its PISA score over the decade was seen for Finland. While it still retains a high ranking, its clear lead over other countries like Japan, Korea and Canada has disappeared.

The best performers over the decade were Portugal, Italy, Norway and Spain. In each case they have moved up from relatively lowly positions in 2006. Of those countries who were already performing well in 2006, Japan and Estonia continued to make good progress.

### Overall Performance

The highest ranking countries are now Japan, Estonia, Canada and Finland.

The lowest ranking country continues to be Greece, followed by, a worsening, Slovak Republic and Hungary.

## Health (Life Expectancy), see Chart 4

### Change in Performance

The two stand out performances over the decade have been Estonia, up 4.6 years, and Korea, up 3.3 years, against an average rise of 1.8 years. By and large, the better performers have started off from relatively lowly positions, and might be seen as catching up.

The poorest performers have been Austria (up 0.3 years) and Germany (up 0.9 years). While laggard countries have tended to catch up, some, like the USA (up 1 year) and Scotland (up by the overall average of 1.8 years), have not.

### Overall Performance

The highest ranking countries remain Japan and Switzerland, followed by a mixture of Mediterranean and Nordic area countries.

The lowest ranking country continues to be in Eastern Europe (Hungary, Slovak Republic, Poland and Estonia) followed by the USA and Scotland.

## Participation (employment rate), see Chart 5

### Change in performance

The biggest falls have been seen in Spain and Greece, followed by slightly worsening performance in Denmark and the USA.

The biggest rises have been seen in Eastern European countries (Poland, Hungary and the Czech and Slovak Republics), followed by Germany.

### Overall Performance

The poorest performers have shifted from being dominated by Eastern European countries (Poland, Hungary and the Slovak Republic) plus Italy, to being Mediterranean ones (Italy, Spain, Greece).

The best performer remain Iceland, by some distance, and then Switzerland.

## Across the UK's constituent countries:

### Scotland:

As one of the main 'fallers' Scotland's relative position has worsened over the decade. This is principally down to falls in its GDP per head and its education (PISA) score. However, while largely unchanged, Scotland's health (life expectancy) score remains very low and the area where it ranks lowest.

### England

As the dominant country within the UK, it is not surprising that its performance largely mimics that of the UK, with no change in its ranking (12th) over the decade.

### Wales

Like Scotland, Wales has also suffered from worsening PISA and GDP per capita performances. In ranking terms it remains the lowest of the UK countries largely due to its low GDP per capita level.

### Northern Ireland

Northern Ireland's ranking has fallen a little (down 2) due to a poor GDP p.c. performance, most probably associated with the problems experienced in the closely connected Irish economy.

## Notes on GDP per capita for UK constituent countries

### Offshore GDP

The data shown here for Scottish GDP per capita includes its geographic share of offshore (North Sea) related GDP. However, much of this offshore activity is known to have non-domestic ownership. This can affect how changes in the Scottish figure are interpreted. Its inclusion:

- exaggerates the level of GDP p.c., in both 2006 and 2016 but more so in the former, as North Sea GDP has fallen notably between 2006 and 2016;
- as a result the **change** in Scottish income p.c. over the decade may also be exaggerated;
- however, the exact quantities involved are unknown (for which we would need to have GNI data but this is not published) and GDP remains the only available measure.

The UK GDP per capita measure also includes offshore GDP, while the figures for England, Wales and Northern Ireland assume a population share of offshore GDP. If Scotland's GDP per capita measure were calculated in the same way then its overall score would fall, especially for 2006. However, the decline seen in its score and ranking over the decade would be less pronounced, although still the 4th worst.

### GDP vs GNI

As with some other countries (e.g. Switzerland) where income is earned within the UK (workplace based) need not equate to where it is spent (residence based). An obvious example is the City of London where GDP per capita is extremely high but most of this ends up in households out with the City. To a lesser degree this will happen between the constituent countries of the UK. Hence while GDP per capita for Wales and Northern Ireland are very low, this may in part be due to people living in, say Wales, but working across the border, in England. As a result, the fall in GDP p.c. performance over the decade may be due to H/H growth outpacing where these H/H's are being economically active. Such discrepancies between workplace and residence will also exaggerate the level of, and change in, living standards. Thus the lower living standards implied for Wales and Northern Ireland will in fact be less pronounced in reality.



## Significant movers outside of the UK countries include:

### Good performers

**Switzerland** - retains its top ranking position, slightly extending its lead in terms of its overall score. This has been driven by its economic (GDP per capita) performance.

**Germany** - as might have been expected given its relative economic strength post the Great Recession, Germany has seen the biggest rise in the rankings (up 7 places), largely on the back of its economic performance (GDP per capita and employment rate).

**Japan** - while still being viewed by many as having a problem economy, due to a low rate of growth, in fact Japan's performance has steadily improved across all four measures, allowing it to move up the overall rankings by 6 places. In relative terms the least impressive result was in relation to life expectancy, although it still retains the number one spot on this measure.

**Estonia** - has risen in the rankings by 6 places and experienced the biggest rise in its score of any country. This improvement was based on its considerable improvement in life expectancy over the decade.

**Poland** - while its score rose by the second highest amount, it only moved up one place in the rankings, due to the big gaps between scores seen at the bottom of the rankings. Its rise was based on its fast improving employment rate.

### Poor performers

**Greece** - as might have been expected, Greece's score has fallen the most. This is largely due to its weak economic performance (GDP per capita and employment rate), while its PISA score remains the lowest of the countries covered.

**Finland** - its decline stems from its education results, where its PISA score has fallen more than for any other country, even though its position remains high.

**Hungary** - retains its lowest ranking position despite its relative improvement in terms of both life expectancy and the employment rate.

*(See also discussion of Scotland, Wales and Northern Ireland for other countries experiencing a declining score over the decade.)*

### Other countries

**Iceland** - still ranks highly but has fallen from 2nd to 4th. While initially suffering post the Great Recession, Iceland's economy has since recovered and so it still ranks very highly, helped by its number 1 ranking for employment and good life expectancy.

**Norway** - has retained its high ranking (3rd), despite a (North Sea related) decline in its economic ranking, which was offset by a significant improvement in its education score.

**USA** - despite being one of the richest countries, the USA continues to be hampered overall by its poor life expectancy and education scores, resulting in a mid-table performance.

## **Policy implications and challenges for Scotland**

While it is difficult to draw any strong policy implications from such a high level review of changes in performance, some issues can be highlighted.

### **On GDP per capita**

The worsening of Scotland's **GDP per capita** position should ease off as a result of the stabilising of oil prices and the, for now, levelling off of North Sea output.

However, worries remain over the underlying strength of the economy. Many private service sectors in Scotland have seen poor growth rates for some time and there may be underlying problems here beyond the onshore impact of declining North Sea operations.

The difficulty with looking elsewhere for economic remedies has been highlighted over the decade covered here, when past fast growers like Ireland and Finland have toiled.

The political and economic uncertainty surrounding Brexit and/or independence does nothing to pacify potential investors worries over future certainty, always a welcome commodity.

Finding a successful way through such uncertain times remains a difficult task, especially when private sector decisions will be the most important ones for success and when so many of these decisions will be made outside of Scotland itself.

### **On education**

Scotland's falling PISA performance might have been hoped to be addressed by the introduction of the Curriculum for Excellence. However, CfE no longer looks like being the success that was hoped for. This highlights the fact that, under devolution, policy changes made over the last decade may have themselves led to a worsening of Scotland's education ranking, i.e. change under devolution does not necessarily equate to success.

Perhaps the lessons taken from OECD and other studies on education have not been well implemented. PISA findings that the quality and independence of teachers and schools are crucial in improving standards may have been paid lip service rather than taken on board in a practical sense.

While Finland's performance has suffered of late it still retains a high overall score and, along with countries like Singapore and Estonia, there may be valuable lessons to be learnt from other education systems.

### **On life expectancy**

Scotland continues to perform badly on this measure. Arguably, despite the falls in education and GDP per capita rankings, it is this area that should be the government's top priority, as it continues to exhibit Scotland's worst relative position amongst the countries covered.

While the 'Glasgow (or Scotland) Effect' is well known little progress seems to be being made in dissipating it. This is despite the best efforts of successive devolved governments, whether with regards to curtailing cigarette and alcohol consumption or even 'Right to Roam'. This brings up the question over the efficacy of 'punishment policies' over alternative strategies. For example, despite price rises in unhealthy practices, the most 'at risk' citizens may continue to smoke or drink to the same degree while other areas of spending take the financial hit.

Scotland's lowly position in terms of life expectancy is not a judgement on the performance of the NHS in Scotland but rather takes into account wider traits, including preventative health measures,

personal preferences, housing etc. While it is difficult to be exact in terms of what to recommend, it does seem that current practice has had little impact in improving Scotland's relatively poor international performance on this measure.

Looking across the OECD the rise in Estonia's life expectancy stands out, and more work might be done to gain an understanding of how it came about.

### **On the employment rate**

Like the UK as a whole, Scotland has seen an improvement here, despite the low GDP growth rate. However, this does come with some caveats, including the associated low rate of productivity growth and falling real wages. The future challenge may be with regards to how to keep the employment rate at such a historically high level while at the same time regaining productivity growth.

Looking further afield, Iceland sticks out as having an exceptional performance. However, such outstanding performances, particularly in relatively small (population wise) countries, may hide exceptional circumstances. For example, the theoretical age for completing secondary education in Iceland is 20 and the average age of entry into tertiary institutions is 26. This may distort the data or indeed it may lead to the better results recorded. Furthermore, Iceland's PISA performance is relatively poor and so there is no direct connection between this and the very good employment performance.

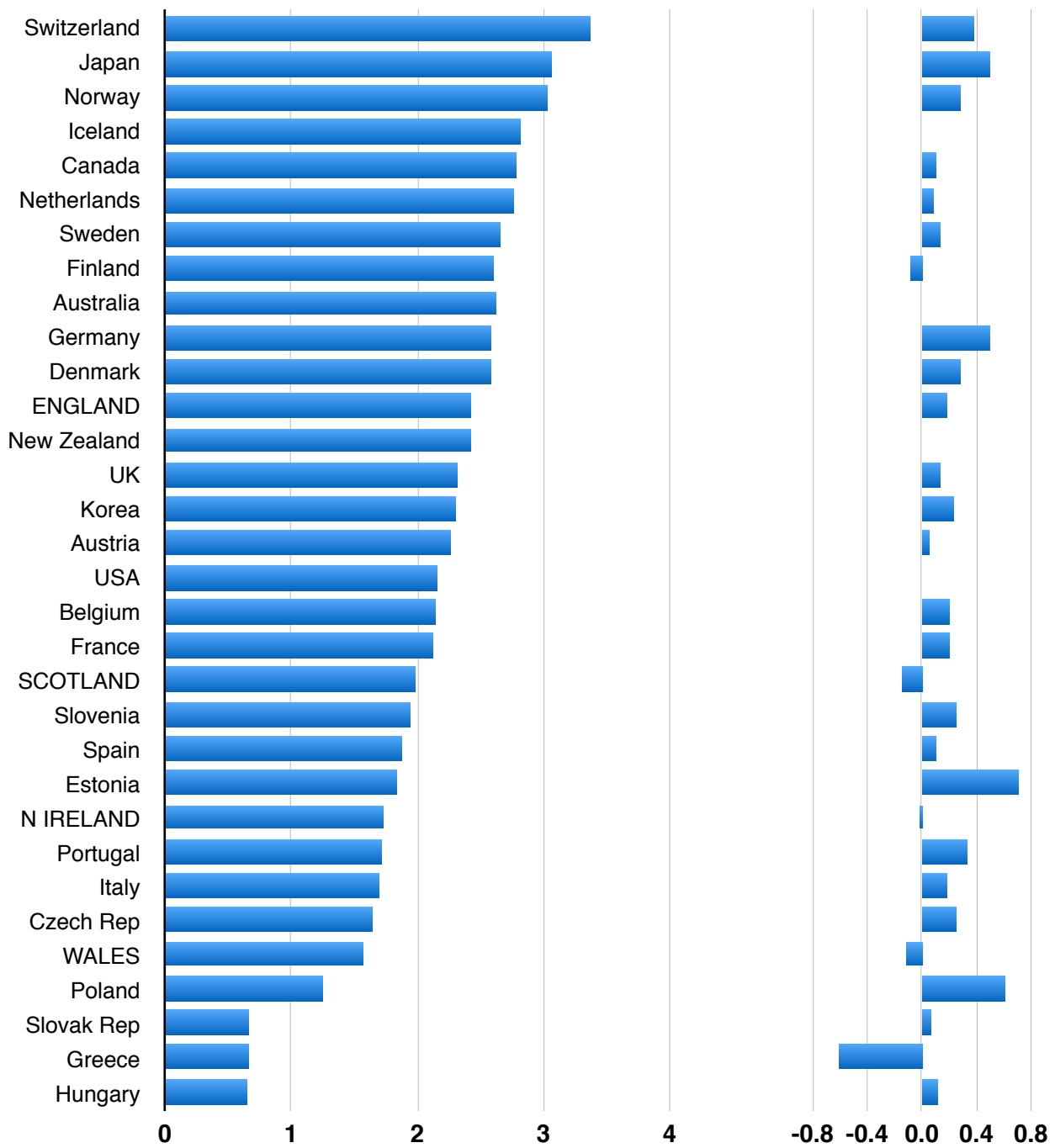
### **In conclusion**

Neither the overall results nor the discussion above should be interpreted as an argument against devolution, rather it highlights that greater political devolution alone does not necessarily equate to improvement in these areas. It is more informed policy choices stemming from such devolution that would bring about such improvement. Currently, for whatever reason(s), this does not appear to be happening.

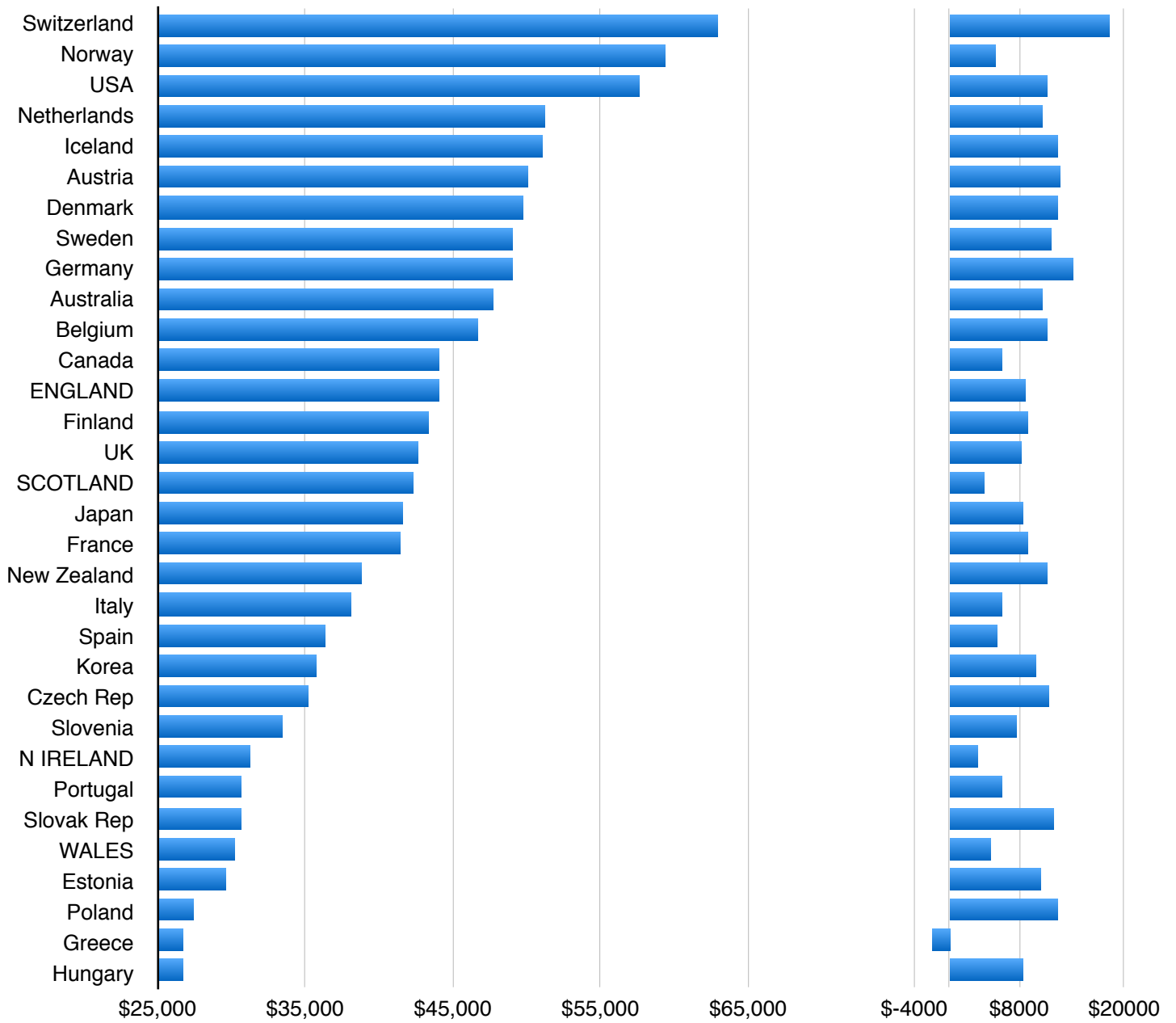
**Table 1: Scores and rankings 2006 to 2016, ordered by 2016 ranking**

2016 rank	Country	2016 score	2006 score	change	2006 rank	change
1	Switzerland	3.38	3.00	0.37	1	n/c
2	Japan	3.06	2.56	0.50	8	+6
3	Norway	3.02	2.75	0.28	3	n/c
4	Iceland	2.82	2.81	0.01	2	-2
5	Canada	2.79	2.69	0.10	4	-1
6	Netherlands	2.77	2.68	0.09	5	-1
7	Sweden	2.66	2.53	0.13	9	+2
9	Finland	2.60	2.67	-0.08	6	-3
8	Australia	2.63	2.63	-0.00	7	-1
10	Germany	2.59	2.10	0.49	17	+7
11	Denmark	2.58	2.30	0.28	11	n/c
12	<b>ENGLAND</b>	2.44	2.26	0.18	12	n/c
13	New Zealand	2.43	2.41	0.01	10	-3
14	<b>UK</b>	2.32	2.19	0.13	14	n/c
15	Korea	2.30	2.06	0.24	18	+3
16	Austria	2.26	2.20	0.06	13	-3
17	USA	2.15	2.14	0.01	15	-2
18	Belgium	2.14	1.94	0.20	19	+1
19	France	2.12	1.92	0.20	20	+1
20	<b>SCOTLAND</b>	1.98	2.13	-0.15	16	-4
21	Slovenia	1.95	1.69	0.25	23	+2
22	Spain	1.87	1.78	0.10	21	-1
23	Estonia	1.85	1.13	0.71	29	+6
24	<b>N IRELAND</b>	1.74	1.76	-0.02	22	-2
25	Portugal	1.71	1.38	0.33	27	+2
26	Italy	1.69	1.51	0.18	25	-1
27	Czech Rep	1.64	1.39	0.25	26	-1
28	<b>WALES</b>	1.57	1.69	-0.12	23	-5
29	Poland	1.26	0.65	0.61	30	+1
30	Slovak Rep	0.67	0.60	0.07	31	+1
31	Greece	0.66	1.27	-0.61	28	-3
32	Hungary	0.65	0.54	0.12	32	n/c

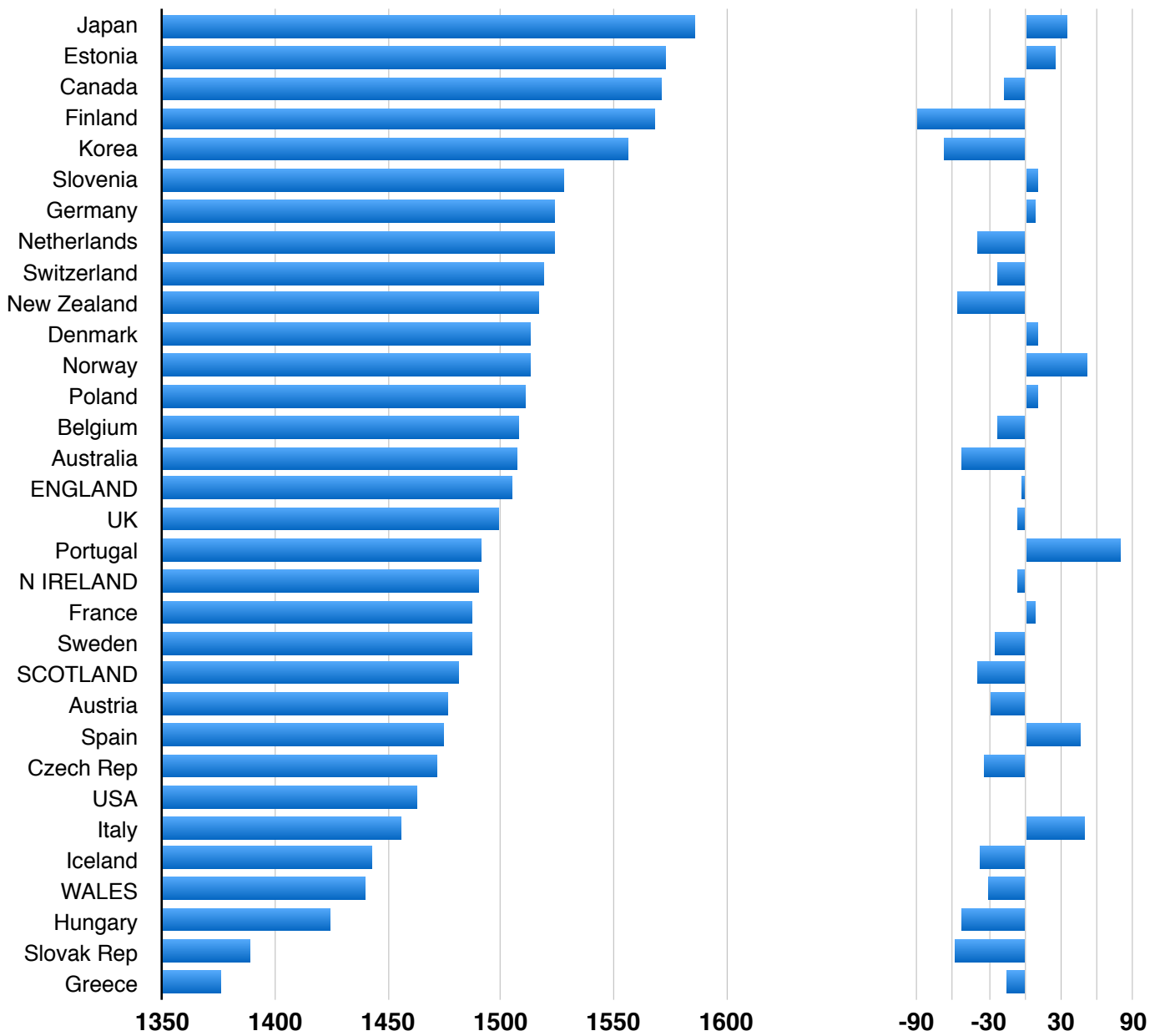
**Chart 1: Overall score in 2016 and change since 2006**



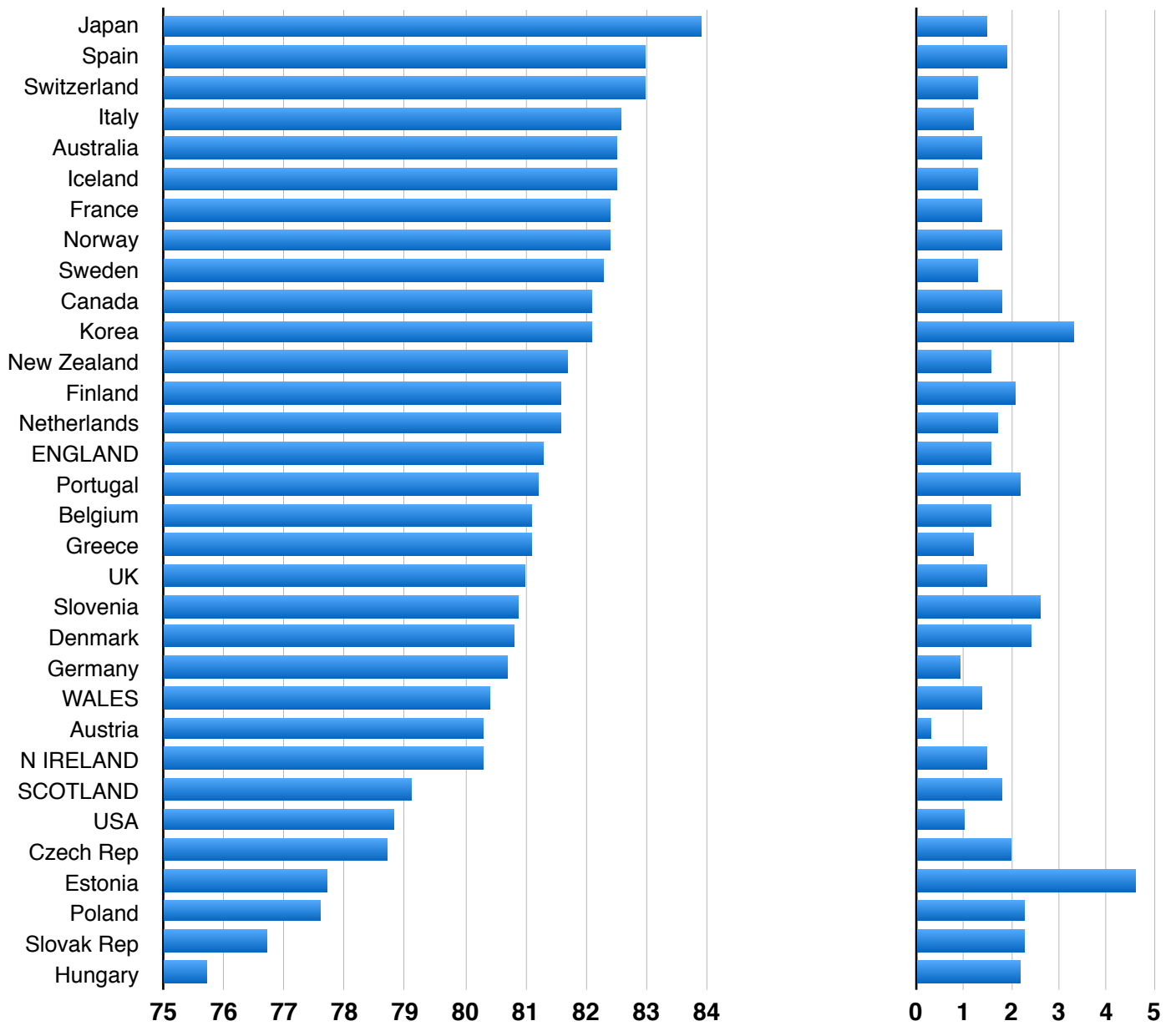
**Chart 2: GDP per capita (current prices, PPP), 2016, and change since 2006**



**Chart 3: PISA results, 2015, and change since 2006**



**Chart 4: Life Expectancy at birth, 2015, and change since 2006**





**Chart 5: Employment rate (15-64), 2016 and change since 2006**

